NEW YORK STATE

Volume One

COASTAL MANAGEMENT PROGRAM

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Introduction

"A coast is where the dreaming begins. It is a place where the line between old and new, fact and mystery, known and unknown is drawn more sharply than in any other landscape. It is here where depths cannot be seen and distances only felt, that every seaborne journey, however brief, is a beginning and a possible ending. Those who are born and reared in such a setting do not look on the world with the same eyes as inland people. When they stand facing the sea, the land is behind them like yesterday, and what they watch, eyes squinting against the brassy glare of sun on water, is tomorrow." John Muir[1]

INTRODUCTION

Throughout history, man has been attracted to land adjacent to coastal waters because of ease of transportation and availability of food resources. Early commerce concentrated in the sheltered bays, and cities developed around those centers. Communities and industries capitalized on the abundant water supply and the sea's enormous capacity to dilute and disperse wastes.

For many years, coastal ecosystems proved resilient to man's exploitation. However, as population increased and land and water resources grew scarcer, man began to alter the ecological integrity of these regions, disrupting the coastal areas' self-renewal processes. Both the environmental and economic viability of coastal waters were seriously threatened.

In 1972, recognizing the importance of properly managing land and water uses along our nation's coastlines, the Congress of the United States passed the Coastal Zone Management Act (PL 92-583). The basic purpose of this Act is to protect, preserve, develop and restore our coast's land, water and air resources so they may continue to fulfill man's present and future needs. To accomplish this goal, each coastal state is encouraged to develop a management program which will ensure that coastal land and water use decisions are made with

> "full consideration to ecological, cultural, historic and aesthetic values as well as to needs for economic development." (Section 303(b))

The New York State Coastal Management Program proposes to balance the needs for continued statewide economic growth and the protection of coastal resources. It will encourage the increase of shipping activity at the state's major ports, the expansion of the fishing industry, the improvement of coastal recreation facilities, and the protection of tidal and freshwater wetlands and critical fish and wildlife habitats.

The Coastal Management Program stresses the retention and the expansion of economic activity in areas identified as important for that purpose. The Coastal Management Program calls for coordination with the State Commerce Department and other economic development agencies to identify coastal-related industries and additional

1 Watkins, T. H. and Jones, Dewitt; John Muir's America; Crown Publishers, Inc., 1976

environmentally-approved sites.

In cooperation with the Department of Environmental Conservation, the Office of Parks and Recreation, and local governments, the attractiveness of shorelines will be protected, historic, cultural and archeological resources preserved, and water quality maintained. Such action benefits both residents and New York's growing tourist industry.

The designation of Geographic Areas of Particular Concern will direct immediate management attention to coastal areas in need of proper development or protection of valuable environmental, economic, recreation, historic or scenic resources. Such areas include wetlands, ports, bays, historic sites, beaches, areas severely threatened by erosion, scenic areas, fish and wildlife habitats and existing and proposed power plant sites.

At the federal level there are major benefits. The Coastal Management Program will ensure that any activities conducted or supported by federal agencies are consistent with the approved State Coastal Management Program. Such activities include development projects, licenses and permits, and federal aid grants.

The Coastal Management Program will provide the opportunity to coordinate the programs of state agencies which affect coastal resources. All state actions must also be consistent with the identified coastal policies. The Program provides a mechanism for resolving conflicts that may arise between various governmental agencies because of their varied interest in the utilization of coastal resources.

Finally, the Coastal Management Program will provide financial and technical assistance to local governments for developing and administering their coastal resources. The funds may be used locally to prepare or amend local land use controls such as zoning ordinances, subdivision regulations or site plan approval processes; to hire needed staff, such as a building inspector, or to prepare proposals for and implement coastal projects such as recreation areas, expanded marina facilities or the restoration of historic structures.

State Background

Historically, the State has had an interest in the preservation of its resources. New York State's Constitution (Art. XIV §§ 4,5) calls upon the State Legislature to conserve and protect its natural resources and scenic beauty and encourage the development and improvement of its agricultural lands for the production of food and other agricultural products. The Legislature, in implementing this policy, shall include adequate provisions for the abatement of air and water pollution and of excessive and unnecessary noise, and the protection of agricultural lands, wetlands and shorelines.

New York has 3,200 miles of widely varied shoreline, including: the marine coast of Long Island with its water quality problems which affect the shellfish industry, recreation opportunities and water supply; New York City with its major urban pressures; the Hudson River Valley which is experiencing an increased demand for the siting of major energy facilities, and where public access to the river has often been limited; the St. Lawrence River, dependent on its tourist industry; Lake Ontario, which is suffering losses of coastal property from high lake levels and erosion; and Lake Erie, the location of productive vineyards and the waterfront of the state's second largest urban area.

New York State's Coastal Management Program

New York's Coastal Management Program recommends that a Coastal Management Board be appointed by the Governor to administer the Program. The Board, to be created in the Department of State will consist of three members representative of the general public. It will be responsible for accepting and administering federal grants to implement the Program and will report to and advise the Governor and the Legislature. The Board will continue to consult and cooperate with state agencies and with local and county governments to ensure that their programs and activities are consistent with the State Coastal Management Program.

New York has chosen to establish a close partnership between state agencies and local government in both the development and implementation phases of the Program. Twenty-five cities, 112 towns and 103 villages are located along New York's 3,200 miles of coastline. In each of these municipalities decisions affecting coastal lands and waters are regularly made by elected officials, planning boards, zoning boards of appeals and other local bodies. The State Legislature has enacted a number of important programs to protect land, air and water resources of statewide significance and to regulate development in areas of statewide concern. These programs are administered either directly by state agencies or by local governments according to specific guidelines set forth in state laws, rules and regulations. Since there are substantial statewide and local interests in the land and water resources of coastal areas, this Program is predicated upon the cooperative involvement of the two levels of government for the effective management of these resources.

New York State's Coastal Management Program relies on a broad range of existing state and local authorities, programs and policies which provide a basis for implementing the Program. In some instances there is a need to develop additional policies, new authorities or program amendments to attain the specific objectives of the Coastal Management Program. Reliance upon existing authorities with minimal new legislation will: assist in achieving the state's resource management programs' objectives; minimize inconsistencies among the state's resource management policies; improve both the coordination and efficiency of project review processes and regulatory procedures; gain the support of local officials and residents; and achieve better, not more, governmental regulation.

The Coastal Management Program favors the use of a performance approach for the implementation of its policies. The program will neither prescribe nor proscribe uses to be sited in an area but, rather, will concern itself with the impact a given use will have on coastal resources.

The exception to this general rule will be the program's active promotion of certain uses, e.g. marinas, agriculture, water-dependent industry, which are regarded as particularly desirable elements within the coastal environment.

The Coastal Management Program will strive to accommodate the dual needs for continued statewide economic growth and the protection of coastal resources. In some cases, one depends upon the other, such as the protection of fish spawning grounds and the maintenance of commercial and sport fishing industries, or the dredging of channels for commercial shipping and recreational boating development. In other instances, certain economic activities such as ports and fish processing plants require waterfront locations. Due to their operational characteristics, these activities can substantially affect coastal resources, sometimes the same resources that are essential to the support of other economic

uses. These interrelationships indicate that both economic and environmental concerns must be given adequate consideration in the development and implementation of this Program.

Program Development

In 1974 New York's Governor committed the State to the preparation of a coastal management program designed to most effectively protect, manage and develop the state's limited coastal resources. This program is based on a series of goals and objectives developed from recommendations of various government agencies, advisory committees, civic associations, interest groups and citizens.

Based on these goals and objectives the Coastal Management Program will:

- Provide opportunities for this and succeeding generations to use and enjoy the amenities of the coastal area;
- Promote the long-term economic well-being of all citizens through wise use and protection of coastal resources;
- Preserve, protect, enhance, and, where possible, restore the natural resources of the state's coastal area; and
- Develop and implement an effective management program that will increase public awareness of the coastal environment, develop policies to guide coastal development, provide for resolution of conflicts between diverse interests in the coastal area and provide legal and administrative mechanisms for implementing coastal policies.

In the first phase of program development the Department of State cooperated with local, regional and state agencies to determine the need, desirability and feasibility of coastal management approaches and techniques.

During the second phase of the program preparation preliminary statewide boundaries were delineated based on recommendations of program participants. Inventories were prepared of coastal resources throughout the State and statewide coastal concerns analyzed.

Based on the analysis of coastal concerns the Program identified eleven general issues of concern throught the state's coastal areas: AESTHETICS, AGRICULTURE, AIR QUALITY, ECONOMIC DEVELOPMENT, ENERGY DEVELOPMENT, FISH AND WILDLIFE, FLOODING AND EROSION, IMPACTS OF OUTER CONTINENTAL SHELF DEVELOPMENT, PUBLIC ACCESS, RECREATION AND WATER RESOURCES.

Existing policies were identified and new policies proposed for addressing these issues. Preliminary management techniques needed for implementation were identified.

Regional Elements

For purposes of program preparation, New York's coast was divided into five coastal regions. Advisory documents were prepared as follow:

New York City: prepared by the Department of City Planning, City of New York.

The advisory report contains a discussion of ten coastal issues; WATER QUALITY,

EROSION AND FLOOD PLAIN MANAGEMENT, SHOREFRONT ACCESS, FISH AND WILDLIFE AND THEIR HABITATS, RECREATION RESOURCES, AESTHETIC RESOURCES, SOLID WASTE, IMPACT OF OUTER CONTINENTAL SHELF ACTIVITIES, ENERGY FACILITIES, AND ECONOMIC DEVELOPMENT. New York City coastal management boundaries are described and special management areas recommended for inclusion in the State Program. The report also contains discussions of land and water use management, and recommendations for implementation.

Nassau-Suffolk: prepared by the Long Island Regional Planning Board.

The advisory report contains a report on the eleven coastal issues identified by the State Program. Long Island coastal boundaries are discussed as well as permissible and priority uses, geographic areas of particular concern and recommendations for implementation. The Long Island Regional Report focuses on detailed subplans dealing with marine fisheries, dredging and spoil disposal, water quality, energy, coastal erosion and recreation access.

St. Lawrence River-Eastern Lake Ontario Area: prepared by the St. Lawrence-Eastern Ontario Commission

The advisory report contains a regional perspective on five coastal issues; WATER QUALITY, COASTAL HABITATS, ECONOMIC ACTIVITY IN THE COASTAL ZONE, PUBLIC ACCESS AND COASTAL HAZARDS. Special management areas are described as well as criteria and the process for the delineation of coastal boundaries. Management of coastal land and water uses and organization for coastal resources management complete the report.

Hudson River Valley: prepared by the New York State Department of State.

The advisory report contains background information on population, economy, environment and a coastal resource inventory of the Hudson River coast as well as a regional perspective of coastal issues: COASTAL WATER RESOURCES, PROTECTION OF FISH AND WILDLIFE AND THEIR HABITATS, COASTAL FLOODING AND EROSION, ECONOMIC DEVELOPMENT, ENERGY FACILITIES AND RESOURCES, AGRICULTURAL RESOURCES, RECREATION RESOURCES, PUBLIC ACCESS AND COASTAL AESTHETICS. There are chapters covering land and water use management, coastal boundary criteria and description and a regional perspective on implementation.

Great Lakes West: prepared by the New York State Department of State.

The advisory report contains a discussion of regional coastal resources and their uses and a regional approach to the following coastal issues: WATER QUALITY, FISH AND WILDLIFE AND THEIR HABITATS, AIR QUALITY, COASTAL FLOODING AND EROSION, ECONOMIC DEVELOPMENT, ENERGY ACTIVITIES, AGRICULTURAL RESOURCES, RECREATION RESOURCES, PUBLIC ACCESS AND COASTAL AESTHETICS. Other report chapters cover land and water use management, coastal boundary guidelines and descriptions, definitions and descriptions of significant fish and wildlife habitats and a regional perspective on the Program and its implementation.

The regional reports have been used in the preparation of the New York State Coastal Management Program report. Many of the recommendations on policies, boundaries, geographic areas of particular concern and implementation have been incorporated into the State Program. Other data is advisory in nature and remains an integral part of the regional report.

Copies of the five regional reports will be available at the office of the agency responsible for their preparation.

Public Participation

The Coastal Zone Management Act, (Section 306(c)(1)), requires full participation of the public and governmental agencies in the development of a state's coastal management program. The Department of State has worked with local government leaders, interest groups and representative citizens in all phases of program development. An outline of the public participation efforts follows:

Public Participation on Local Level

Local level public participation has been accomplished using several different approaches.

Citizen advisory committees have been formed throughout most of the state's coastal area. In some areas where there is an active 208 (Areawide Waste Treatment Management) Program, the coastal committee has been formed as a sub-committee of the 208 Advisory Committee. In other areas local government representatives have joined with local shoreline residents to form coastal advisory committees. Sub-committees have been formed to explore in depth such issues as fishing access, recreational needs and marine resources.

Newsletters have been published by local agencies and interest groups describing the coastal program and exploring coastal issues that are of importance to that particular audience. There has been local coverage in newspapers, radio and television. Many regional and county agencies have prepared slide shows describing their coastal management program.

Public Participation on State Level

The Department of State has developed a state level public participation program which is closely coordinated with local public efforts.

The core of the state's public involvement is the New York State Citizen Advisory Committee. This advisory board is made up of representatives from the five coastal regions of the State. The committee has met regularly in various coastal areas of the State to review technical reports, make recommendations regarding the State's Program and policies, and assist in public participation. The Citizen Advisory Committee members were selected in order to give the State's Program a desirable proper balance of regional and special interests.

The Department of State Coastal Management staff has held a series of public meetings throughout New York to inform local government representatives and the general public about the goals and objectives of the Program, the coastal boundaries of the State, preliminary nominations of areas of particular concern (both for preservation/restoration and development), the determination of permissible uses in the coastal area including uses of regional benefit, and proposed state policy on the eleven coastal issues. Public input has been earnestly sought on those elements of the draft program as well as on alternative management mechanisms and authorities necessary to implement the Program. Public meetings took place in the five coastal regions of the State during July of 1978.

The Department of State developed displays, printed material, and slide shows about coastal management. These materials have been available for public distribution. Speakers are prepared to explain the Program to and receive input from interested groups throughout the State.

Public service announcements have been aired throughout the coastal areas of the State. Daily, weekly and bi-weekly newspapers have been provided with news releases on various aspects of the Program. Interviews about New York's Coastal Management Program have been granted to all media.

The most productive public involvement technique has been that of meetings on a one-to-one basis with local government officials, and small workshop sessions with those officials, interest groups and concerned coastal residents. This coordination will be continued to assist in coastal decision-making during implementation of the Program.

Section 306(c)(3) requires that the State "hold public hearings in the development of the management program." These will be held in April, 1979.

Section 306 (c)(2) requires that "local, areawide and interstate plans applicable to areas within the coastal zone existing on January 1 of the year" in which the program is submitted, be consulted to ensure coordination with the State's Program. This section also requires establishment "of an effective mechanism for continuing consultation and coordination between state and local governments and interstate and regional bodies." The New York State Department of State has contracted with local, county, regional and state agencies to ensure that necessary input and coordination take place throughout both the planning and implementation phases of the Program. State agencies which have programs directly affecting state coastal resources have worked closely with the Department of State to develop a comprehensive coastal management program which will balance economic needs with the need to protect fragile coastal resources. Consultation and coordination will continue with federal, state, regional county, and local agencies through final planning and implementation of the Coastal Management Program.

Program Implementation

Section 306 of the Coastal Zone Management Act requires that a state have the authorities and organizational structure necessary to implement its program.

To the greatest possible extent, New York State relies upon existing authorities to carry out the policies contained in its Program. Over the years, New York has enacted a substantial amount of legislation that is aimed at the wise use and proper management of its various resources. State authorities provide a sufficient base for implementing the policies presented in Section IV. There are instances, however, where it was determined that additional authorities were necessary, but such situations were minimal. To provide direction to municipalities, policies for local coastal management programs and the authorities necessary for their implementation are proposed. These local recommendations are contained in Sections IV and V of this report.

In order to achieve implementation, New York must fulfill all federal requirements, which include passage of necessary legislation and approval of the Program by the Governor.

Federal Requirements

The Coastal Zone Management Act of 1972 (PL 92-583), as amended, gives recognition to the importance of the nation's coastal areas and the present and potential adverse effects that intense development pressures have or may have upon this national resource. The Act authorizes a voluntary program of financial assistance to states to manage their coasts and is administered by the U.S. Secretary of Commerce, through the National Oceanic and Atmospheric Administration (NOAA), Office of Coastal Zone Management.

The Act declares that "there is a national interest in the effective management, beneficial use, protection, and development of the coastal zone." (Section 302 (a)). This legislation describes how competition for the utilization of coastal resources, brought on by the increased demands of population growth and economic expansion, has led to the degradation of the coastal environment, including the "loss of living marine resources, wildlife, nutrient-rich areas, permanent and adverse changes to ecological systems, decreasing open space for public use, and shoreline erosion." It further states that "the key to more effective protection and use of the land and water resources of the coastal zone is to encourage states to exercise their full authority over the land and waters in the coastal zone by assisting states... in developing land and water use programs...for dealing with coastal land and water use decisions of more than local significance." (Section 302 (h)).

The state governments have prime responsibility for achieving "effective management, beneficial use, protection, and development of the coastal zone" (Section 302 (a)). Under Section 305 of the Act, four annual grants are available to coastal states and territories (including states along the Great Lakes) to finance the development of management programs. Guidelines for the preparation of such management programs are provided in 15 CFR, Part 923.

After developing a management program, the state may submit its program to the Assistant Administrator of the National Oceanic and Atmospheric Administration for his review and approval. If the management program satisfies all of the federal requirements and is approved by the Assistant Administrator, the state is then eligible for annual grants under Section 306 of the Act to administer its program.

Office of Coastal Zone Management has published criteria to be used for approving state coastal management programs and guidelines for program adminsitrative grants (15 CFR, Part 923.90-923.102). These criteria and guidelines set forth (a) the standards to be utilized by the Assistant Administrator in reviewing and approving a state's coastal management programs, (b) procedures by which coastal states qualify to receive program administrative grants, and (c) policies for the administration of approved coastal management programs.

The Assistant Administrator will review the management program in accordance with the following general requirements: (1) The management program must be comprehensive. (2) It must address and provide for the management of those significant resources, uses and areas that the State has determined make the coastal area a unique, vulnerable or valuable area requiring various forms of management. (3) The policies, standards, objectives and criteria upon which program decisions will be based must be articulated clearly and be sufficiently specific to provide a clear understanding of the content of the program, especially in identifying who will be affected by the program and how, and providing direction and predictability for decision makers who must take actions in accordance with the management program. (4) There must be sufficient policies of an enforceable nature to insure the implementation of and adherence to the management program.

As of September 30, 1978, 33 out of 34 eligible coastal states and territories had received program development grants and 11 states (Maine, Massachusetts, Rhode Island, North Carolina, Maryland, Hawaii, Washington, California, Oregon, Michigan, Wisconsin), the territory of Puerto Rico and a segment of New Jersey's Program had received program approval. New York State will seek approval of its program by 1980.

The 1976 amendments established a new assistance program consisting of grants, loans, and bond guarantees to states impacted by Outer Continental Shelf oil and gas or other forms of energy development. In order to be eligible for assistance, a state must be receiving either development or administrative grants, or be developing a management program which, in the Assistant Administrator's opinion, is consistent with the policies and objectives contained in Section 303 of the Coastal Zone Management Act.

Besides the financial assistance incentive for state participation, the Coastal Zone Management Act stipulates that federal activities affecting the coastal zone shall be, to the maximum extent practicable, consistent with approved state management programs, the "federal consistency" requirement, Section 307(c)(1) and (2). The state must concur with any applicant's certification that a federal action, a federal license or permit affecting land and water uses within the coastal zone, or federal assistance to state or local governments, is consistent with the state's coastal management. This section of the Act also requires that any outer continental shelf oil and gas activity described in an exploration, development or production plan be certified prior to any approval by the Department of the Interior. If serious disagreement arises between a federal agency and a state with respect to the administration of a state's program the U.S. Secretary of Commerce will mediate. Public hearings will be held in the affected municipality.

The report which follows contains all the required components of New York State's Coastal Management Program. The state coastal boundary, description of coastal regions, coastal policies and means of implementation, program management, national interest, uses of regional benefit, federal consistency, geographic areas of particular concern, amendment procedures and next steps are discussed in the separate sections. Section X contains a draft environmental impact statement as required under the New York State Environmental Quality Review Act.

A Coastal Atlas is being prepared to present mapped resource information for all portions of the state's coastal area. The atlas consists of three maps for each particular coastal area. For a more extensive description of the Atlas consult Appendix H of Volume 2.

II.
Coastal Regions of New York

Section II

COASTAL REGIONS OF NEW YORK

The Marine Coast of Long Island and New York City

Long Island

Long Island is a detached segment of the Atlantic Coastal Plan, separated from the mainland on the north by Long Island Sound and from Manhattan by the narrow East River and New York Harbor. The Atlantic Ocean completes the island's salt water encirclement. The island is 120 miles long, varies in width from 20 miles to less than a mile, and is surrounded by a shoreline (including barrier islands) of approximately 1,265 miles.

The last continental ice sheets retreated from Long Island and elsewhere 10,000 years ago leaving behind unconsolidated, highly erodible glacial materials. Since then, rising sea levels have shaped the island's rough outline. Today littoral forces of wind, wave, and tide constantly reform the coast. About once every two years, storms cause moderate damage to the shoreline, and approximately three times a century a catastrophic storm rips into the island. In a few hours severe storm conditions can alter the shore as much as normal conditions do in a hundred years. Thus, recession is a variable process, depending mostly on the frequency and severity of storms.

The north shore of Nassau County is eroding at a rate of one half foot to a foot per year, and Suffolk County's north shore is eroding even faster. Despite this apparent vulnerability, people have continued to build all along the fragile shoreline. In order to protect shorefront property, it has been the practice to construct costly jetties, groins and seawalk and to nourish beaches. These measures tend to be effective in a limited area and may actually cause serious problems in adjacent areas.

The island's north shore, west of Port Jefferson, is a highly irregular configuration of deep harbors and bays separated by peninsulas projecting into Long Island Sound. Sand and gravel eroded from the peninsulas have been deposited as spits (West Beach on Eaton's Neck) and bay mouth bars (Old Field Beach at Port Jefferson). East of Port Jefferson a line of uninterrupted bluffs rising as high as 130 feet extends all the way to Orient Point. Erosion rates of these bluffs range from 0.8 to 5.2 feet a year.[1]

Along the island's south shore are two physiographic sections: an eastern headlands section on the island's south fork and an off-shore barrier complex. The eastern headlands section, extending 33 miles westward from Montauk Point to Southampton, is characterized by truncated hills of varying heights and steepness. Fronted by narrow beaches of gravel and coarse sand, these headlands have suffered severe erosion.

The barrier complex stretches parallel to Long Island for 73 miles from Southampton to the Nassau County/New York City boundary. Fire Island National Seashore and Jones Beach are the best known of these formations. Consisting of ocean beach, irregular sand dunes and bayside tidal lagoons, these narrow strips are continually subject to the action of waves, wind and westward longshore currents.

1. Lee E. Koppelman, et al, The Urban Sea: Long Island Sound (New York, 1976), p.50.

Most important, these barriers receive the brunt of severe storms and protect the bay and "mainland" from storm damage.

In addition to the loss of land through erosion, valuable land resources in Long Island have been absorbed in the rapid population expansion from west to east. Although Suffolk County remains today the most productive agricultural county in New York State in terms of value of products sold per acre, most of the farmland in Nassau and Western Suffolk Counties has been converted to transportation systems and to residential, commercial, and industrial development.

The salt marshes and meadows of Long Island are highly productive fish and wildlife habitats. They also serve as pollutant filters and as natural buffers dissipating the energy of storm waves. However, in the period from 1954-1964, these multiple values were often overlooked as 8,200 acres of marshland in Nassau and Suffolk Counties disappeared to be replaced by residential, recreational, industrial and related development. The ten-year period saw somewhat greater losses in Nassau County (33 percent of the total 1953 acreage) than in Suffolk County (17 percent of the total.[1]

Increased development has also put stress on the island's groundwater aquifer, sole supply of water for drinking and other purposes. Since the aquifer is vast and continually replenished, the overall quantity and quality of Long Island's underground water is satisfactory. However, a greater demand for water from the western end of the aquifer created an east-west imbalance in the system. Failing septic tanks in natural aquifer recharge areas threaten to elevate nitrate concentrations in the groundwater.

Stormwater runoff is another development-related problem affecting the groundwater supply. Basins have been built throughout Long Island to retain stormwater runoff and filter it back into the aquifer. Now, trace levels of toxic chemicals from lawns, roads, parking lots, industrial sites and other areas are being detected in some parts of the aquifer. Stormwater may require treatment to remove those chemicals.

Although the overall condition of Long Island's surface water is good, human uses of the coast cause localized degradation. Surface waters in and adjacent to highly developed areas are impacted by nitrate and BOD (biochemical oxygen demand) from municipal sewage treatment plants. These point sources of pollution contribute over 70% of the total internal loading of nitrogen in such areas as Manhasset Bay, Hempstead Harbor and Hempstead Bay in western Nassau County and Flanders Bay in eastern Suffolk County. Generally, sewage treatment plant effluents are not considered a major source of bacterial (coliform) contamination of surface waters, unless the plants are outmoded as in Hempstead Bay. There are relatively few industrial discharges to surface waters on Long Island, and those that do occur (i.e., in Glen Cove Creek) have only localized impacts.

For certain areas, non-point sources of pollution carried by stormwater runoff, streamflow, and groundwater underflow are the major contributors of pollutants to surface waters. Areas where non-point sources are the major contributors include Oyster Bay and Point Jefferson on the north and Great South Bay and Moriches Bay on the south. On-site sewage disposal systems (septic tanks and cesspools), landfills and scavenger waste treatment facilities, and fertilizers contribute directly to surface water quality by contamination of streamflow and underflow with nitrates and other soluble pollutants. Urban

1. Nassau-Suffolk Regional Planning Board, Fourteen Selected Marina Resource Problems of Long Island, New York: Description Evaluations (Hartford, 1970), p.37.

stormwater runoff contributes coliform bacteria to most surface waters and has necessitated the closing of large areas to shellfishing. Wastes from semi-wild waterfowl populations and domestic animals on the island's east end are collected in runoff and further degrade surface waters. Finally, development-related erosion, dredging and dredge spoil disposal add particulates and other pollutants to coastal waters. In addition to local point and non-point sources, pollution from New York City affects Long Island's water quality.

Offshore, a potential for additional pollution exists with outer continental shelf oil exploration and related activities. Based on United States Geological Survey estimates, there is an 81 percent chance of one to four spills of greater than 100 barrels over the life of North Atlantic field operations. Tankers using the Nantucket and Ambrose traffic lanes could endanger the Island's barrier beaches as well.

Water quality problems, affect the Island's important commercial fishing industry. Total landings of fish (finfish and shellfish) reached a peak of 31,000 metric tons in 1938, continued high for a decade, and declined steadily to less than 15,000 metric tons in the early 1970's. Deteriorating water quality, as well as overfishing, other man-made environmental changes, and natural fluctuations, is thought to have caused the decline.

Nonetheless, the water surrounding Long Island continues to be a permanent or seasonal home for a wide variety of finfish and shellfish. Although certain species of finfish are present throughout the year, seasonal migrants tend to dominate the fish population. In 1975 important deepwater species were found primarily on the southern side of the island and also in the vicinity of Block Island Sound, Montauk Point and Georges Bank. Of all shallow water species landed in 1975, hard clams represented the greatest tonnage. They were found primarily in Great South Bay. Oysters and scallops were harvested primarily in the Gardiner - Peconic Bay region.

Not only do the vast expanses of water surrounding Long Island support commerce; they also constitute an extensive recreational resource serving residents of the entire New York metropolitan region. Public access, as well as good water quality, is essential to the enjoyment of coastal waters. One national seashore (Fire Island), seventeen state parks and numerous county, town and private recreational areas provide access to coastal waters. In Nassau County, despite extensive development pressures, lands have been set aside for extensive recreation uses; 3,234 acres are federally-owned, 5,261 state-owned, and 5,315 county-owned. In Suffolk County, where development pressures are much less, there has been an opportunity to bank many more acres of parkland in anticipation of growth; 3,391 acres are federally-owned, 18,545 state-owned and 14,787 county-owned.[1] Still, the island will continue to be in need of additional recreational capacity over the next 25 years, not so much to meet new demand as to relieve current pressures.

New York City

Each of New York City's boroughs is situated on an island or islands, with the exception of the Bronx, which is part of the continental land mass. The combined shoreline is 578 miles, 18% of New York State's 3200 miles of designated

1. Nassau-Suffolk Regional Planning Board, Nassau-Suffolk Regional Element Report, (Hauppauge, 1978) p. 18.

coastline. The topography of these islands ranges from abrupt rocky outcroppings in linear patterns, such as those found in northern Manhattan, to steep slopes of unconsolidated glacial material in random clusters which level out on the edges of the islands finally ending in wetlands and beaches.

Throughout the city's history, land has been intensively used. Surface conditions have been radically altered by excavation, filling, construction and paving. The extent of wetlands has been significantly reduced and natural drainage patterns altered in many cases as filling activities extended the city's land area. Yet, with all these alterations, the general physiography remains predominantly as it was determined by geologic formation and other natural forces.

The Hudson River flows along Manhattan's western shore carrying water from the distant Adirondack Mountains. It is a tidal estuary as are all the straits surrounding New York's islands. Fresh water laden with nutrients mixes with salt water in these estuaries to create an ideal environment for a wide variety of plant and animal species. Jamaica Bay, an estuary with associated wetlands, is a major spawning ground for finfish and crustaceans as well as a habitat for at least 200 species of birds.

The harbor of New York is naturally divided into several parts. The Lower Bay at the entrance to the Atlantic Ocean is connected via the Ambrose Channel to the Upper Bay which in turn meets the Hudson River. Forty-two channels run throughout the harbor. These channels require constant maintenance. Unfortunately, many adverse environmental impacts have been associated with the processes of dredging and dredge spoil disposal, particularly when the sediments being dredged are polluted.

During dredging operations, sediments are resuspended, and mixed with water thereby increasing the potential for immediate release of contaminants into surrounding environments. When the dredged sediments or spoils are deposited at an open water disposal site, contaminants may be released slowly into the overlying water column for several years. Because of this threat, the federal government anticipates phasing out all open-water disposal of polluted dredge spoils by 1981.

New York City must develop alternate methods of dredge spoil disposal. These methods include inland disposal and placement behind diked enclosures. However, the shortage of available and suitable onshore disposal sites and the potential leaching of contaminants from such areas into adjacent ground and surface waters make these alternative methods expensive and hazardous.

Other important adverse impacts may result from dredging and disposal activities in New York City's waters. These include changes in bottom topography, local water circulation patterns, and flushing, erosion and sedimentation rates. Biological effects, such as the loss of the aquatic habitats mentioned above may result from the physical and chemical impacts of dredging.

The potential for oil and hazardous spills is high in New York's harbor due to the substantial amount of commercial shipping. The possibility is compounded by the location of numerous oil and other bulk storage facilities in the area. While the development of offshore oil and gas production and new energy facilities may contribute to the revitalization of some deteriorating coastal areas in New York City, the chances for spillage multiply.

Floating debris in the Hudson River and New York harbor is another serious problem. The debris comes from decaying piers and bulkheads, abandoned ships, and vegetation. It is estimated that the Hudson River annually receives approximately 14,130 cubic feet of debris posing a threat to commercial shipping and recreational craft.

The port of New York has been the nation's foremost maritime center since the Erie Canal opened in 1825, making of the city a funnel for westward expansion. For many years, the volume of foreign cargo grew tremendously. Industries associated with or dependent on water transportation located along Manhattan's shores.

The heyday of New York's harbor has passed though. People and commerce have moved from inner city to suburb leaving many unuerutilized, sometimes abandoned, sites along Manhattan's waterfront. New methods of production, antiquated physical plants, need for more space, increased reliance on the truck for product distribution, deteriorating surrounding neighborhoods, and spiraling downtown property taxes compounded by the financial incentives provided by suburban counties and other states, are some of the reasons for the reduction in manufacturing and commercial activity along New York's waterfront. Revitalization of these areas is one of the most effective means of encouraging economic development without at the same time consuming valuable suburban and rural open space.

Some deteriorating waterfront areas might be redeveloped to meet the recreational needs of New York's 7.9 million residents (1970). Much of the city's outdoor recreation is based on structured activities, with opportunity for less structured relaxation provided along the southern shore in Gateway National Recreation Area and other smaller sites. Here good water quality allows for such activities as swimming and fishing. However, a great many New Yorker's lack adequate means of transportation to outlying parks, are barred from the immediate shore by certain kinds of development and forced to crowd into more accessible facilities. Development of recreation sites in deteriorated waterfront areas closer to densely-populated residential centers would alleviate crowding and access problems and at the same time contribute to an improved economic climate.

More important than inadequate recreation resources for the people of New York are the basic problems of water quality, solid waste disposal and air quality caused by the dense population. Due to a backlog in the processing of applications for construction of treatment plants, inadequately treated sewage continues to enter adjacent waters. Urban stormwater runoff and combined sewer overflows further aggravate the problem. Open water dumping of sludge and other materials has polluted New York's waters, although this dumping will stop by 1981. Even where onshore disposal sites for solid waste are available-and these are limited - the hazardous nature of some materials could eventually degrade water quality.

While many of the critical environmental and economic problems besetting New York City affect areas well outside its metropolitan boundaries, the city's vast natural and cultural resources are a boon and creative stimulus to the immediate region, state, nation and beyond.

Hudson River

The Hudson River estuary is a long arm of the sea, extending 150 miles inland. Its present geologic form dates from the period after the last glacier. As the glacier melted, rising seawater moved in and flooded the old course of the river. Today, because it is so large a tidal and navigable river, the Hudson is unique in the Northeastern United States.

As an estuary, two major characteristics of the Hudson are its tidal action and its salinity. Up to Troy, the river's flow reverses with the tide, the mean tidal range at Albany being 5.3 feet. The limit of salt water intrusion in the Hudson varies. It is primarily determined by the interaction of the tidal force, which pushes salinity up the estuary, and the freshwater inflow, which flushes the estuary seaward. The limit, therefore, changes with the seasons; during spring runoff, freshwater inflow is greatest and salt water extends not far beyond Yonkers; while in the winter, salt water can extend nearly to Poughkeepsie, a distance of seventy miles.

The history of the Hudson River reflects a strong relationship between the natural environment and the economy. Ease of water and water-level transportation, fisheries, agriculture and the scenic quality of the area have been major factors in the development of the Valley. These factors, plus its proximity to large population centers, continue to make the Hudson a unique economic and environmental resource for the State, and therefore, are the major concerns of the Coastal Management Program in the Hudson Valley.

The Hudson is an important link in the state's transportation network, being navigable for ocean going vessels as far as Albany. Beyond Albany, the State Barge Canal provides a system for shallow draft vessels that connects the Port of New York with the Great Lakes and the St. Lawrence River. The Port of Albany is the most diversified of the upstate New York ports. It is a significant economic force in the Hudson Valley, because of its location at the center of a large market area, excellent highway and railroad access, a 12 month operating capability, and a strong commitment from both the State and the Albany-Rensselaer business community to see to it that the port realizes its potential as a shipping and industrial center. Between the Port of New York and the Port of Albany, the Hudson River serves a limited but important group of water related industries including petroleum, sand and gravel, cement, and gypsum. Without access to the river these industries would operate at an economic disadvantage. In general, the region benefits from the lower cost of water transportation rather than by truck or rail. In some cases (particularly gypsum and gravel), the cost savings of water shipment are directly responsible for the location of those industries along the river. The Coastal Management Program, through such mechanisms as the proposed water dependent legislation, will attempt to ensure that the Port of Albany and these water-related industries have sufficient land for expansion and are not constrained by incompatible adjacent uses.

In the mid-eighteenth century rail lines were built along both sides of the Hudson. For almost the entire length of the east shore, and for perhaps half the length of the west shore, these railroads were built directly on the river's edge. Thus, railroads have severely limited access to the Hudson. However, the railroad must also be seen as essential to economic life in the State. The Coastal

Management Program will seek ways to improve access to the river in a manner that will not hinder rail service. It should also be noted that while the railroads have limited physical access, they have also served to prevent other development of the shore which may have had greater adverse impact on the quality of the coast.

The Hudson River is inhabitated by an extraordinary rich fish fauna. Some of the best known Hudson River fish are diadromous forms, those fish which spend part of their life cycle in freshwater and part in salt water. Among the important diadromous species are the American eel, shad, alewife, striped bass, and sturgeon. Indeed, the Hudson River is one of the major spawning grounds for several commercially significant Atlantic species, particularly striped bass. In the past, commercial fishing in the Hudson River itself was also a viable industry. However, fishing activity has been reduced because of the sharply increased pollution, the unpredictability of the catches, and changing social conditions. While the river has become cleaner through treatment of municipal waste, past discharges of toxic wastes still contaminate the river. Because of this toxic pollution, all commercial fishing in the river below Troy is banned except for shad, goldfish, and large sturgeon. The river and its immediate environs are also an important wildlife habitat, particularly the many wetlands that line the river. These are used by migratory waterfowl and many other forms of wildlife. The Coastal Management Program is concerned with the revival of the Hudson River fishing industry and the public enjoyment of fish and wildlife. The State, through its programs of pollution control and wetlands protection, can help assure preservation of fish and wildlife habitats.

The Hudson Valley is an important fruit growing area. Orchards in Columbia, Ulster, Dutchess and Orange counties account for more than a fifth of the value of fruit grown in New York. Most of this fruit production occurs close to the river. It is found there, because of the way the Hudson River and the surrounding land form have influenced the microclimate of the agricultural areas. The area's greatest concentration of orchards is found in southern Ulster County and northern Orange County. Microclimate and soil conditions make these orchards among the most productive in New York. It is in this area also that the Hudson Valley's best vineyards and wineries are found. This is a small but significant industry with a long history and a strong potential for growth. Hudson Valley agricultural land is under pressures for conversion to other uses. However, reflecting a local concern for preserving farmland, most of the important coastal agriculture is within Agricultural Districts. The Coastal Management Program accords the highest priority to the agricultural use of these lands.

The Hudson Valley coastal area is one of the most outstanding scenic attractions of the United States. Its scenery includes the dramatic vertical rise of the Palisades at the lower end, beautiful views of the Catskills along its upper reaches, the magnificent Hudson Highlands which rise straight from water's edge, long stretches of farms and historic estates, and a scattering of urban waterfronts. The outstanding scenic resources of the Hudson Valley inspired one of the most significant and first truly American schools of painting. Much of the scenic area of the Hudson is in public ownership, notably that land owned by the Palisades Interstate Park Commission, and in the Highlands that land either in state parks or owned by the U.S. Military Academy. However, significant areas of these scenic resources are not in public ownership and are not protected. The Coastal Management Program has identified these as areas

for priority attention, and the State Legislature has directed the Department of Environmental Conservation to undertake a detailed study and make recommendations to the Legislature as to the best way to protect these scenic resources.

Because the Hudson can provide large amounts of water for cooling purposes, energy production facilities have been located along its banks. Numerous proposals for additional facilities, mostly nuclear, have been made and have endangered much controversy over their potential impact on existing industry, fisheries, agriculture, and the scenic quality of the area. The Coastal Management Program will insist that consideration be given to these factors in the proceedings held in connection with the siting of proposed energy facilities.

GREAT LAKES

The Great Lakes area has the most diverse shorelines of New York State's coastal regions. Although the area has problems common to the state's other coastal regions, its 1,500,000 residents have additional concerns which are unique to their area. It also includes the state's second and third largest cities and its principal heavy industry center. Its borders encompass the state's most productive vineyards, the vast freshwater bodies of Lake Erie, the Niagara River, Lake Ontario and the St. Lawrence River, and the renowned scenic resources of Niagara Falls and the Thousand Islands. The Coastal Management Program provides a framework and the necessary tools for preserving and improving the quality of the resources and helping the people of the Great Lakes Area take greater advantage of the waters and lands of their coast.

The Great Lakes area extends for over 700 miles along the mainland bordering Lake Erie, the Niagara River, Lake Ontario and the St. Lawrence River. When the mainland is combined with the 340 miles of island shores, located mostly in the two rivers, the Great Lakes coast makes up one-third of the state's entire coastline.

The greatest areal extent of the Great Lakes is represented by its waters - approximately 4,000 square miles. Onshore, the area of the 89 communities which are located along the coast totals almost 3,000 square miles. The coastal lands lie in the Erie-Ontario Plain and in the St. Lawrence Marine Plain, areas of generally low relief broken only by drumlin formations along sections of eastern Lake Ontario. Despite the absence of significant variations in the relative altitude of land forms along the coastline there are many prominent topographic features which give the area a unique character. In addition to Niagara Falls Gorge and the Thousand Islands which attract millions of visitors each year, those features include: the falls and gorges of the Genesee River and Chautauqua Creek; the embayments, such as Braddock Bay and Sodus Bay, of the counties east of Orleans; and the area's only dunes which stretch for five miles along the eastern shores of Lake Ontario. A particularly significant topographic form are the glacial bluffs found along a substantial portion of the coasts of Lake Erie and from Niagara to Oswego County on Lake Ontario, rising in many places to over 120 feet in height. The elevation of the bluff provides superb vantage points for sweeping views of the coast, an advantage which is prized by tourists as well as shoreline residents. The bluff also severely limits access to the shores and to the waters of the coast. This means that the multi-faceted relationships between land and water found in other coastal areas are lacking along much of this section. Because of the single dimension of the coastal experience in most of those bluff areas, and the lack of viewing points further inland which are due to the flat configuration of the land, connection with the coastal waters fades quickly, moving away from the edge of the shore. Another characteristic of the Great Lakes coast is the scarcity of wide beaches, even when the lakes are at their average levels. This is due principally to the absence of suitable beach-building materials: most of the sand particles eroded from the glacial shorelands are small and are carried offshore by wave action.

There are a number of issues in the Great Lakes area which reflect the concerns of its residents and of the Coastal Management Program. Some issues are geographically narrower in focus, as for example: how to preserve the approximately 70,000 acres of land in Chautauqua County which include the vineyards. Because of the temperature modifying effects of Lake Erie, over half of the state's grapes are grown in that county where virtually all of the lands are in agricultural districts thus indicating a strong local interest in the retention of the land in agriculture. Additional questions relate to the possible effects of gas drilling in Lake Erie; and of potential siting of additional power plants. Other issues are more widely felt along the coast and among these are: how to improve and preserve the area's fish and wildlife resources; how to deal with erosion and high lake levels; and recreation.

The waters of the lakes, rivers and tributary streams contain one of the state's most valuable fisheries. In the past, due to over-exploitation, water pollution, the destruction of habitats and the introduction of certain non-native fish, many valuable species such as sturgeon and atlantic salmon became virtually extinct. In recent years, because of intensely focussed fishery management practices, many species highly prized by fishermen have been on the increase. Numerous fish habitats of significance are located throughout the area and include: Cattaraugus Creek; Strawberry Island in the Niagara River, a major spawning ground for muskellunge; Eighteen Mile Creek in Niagara County which serves as a spawning habitat for salmonids, northern pike and smallmouth bass; Johnson Creek in Orleans County, Braddock Bay, one of the few substantial wetland complexes in the area, which supports largemouth bass and northern pike populations; the embayment habitats of Wayne and Oswego counties; the renowned fishery in the Salmon River; the northern pike fishery which extends from Henderson Harbor through the Thousand Islands; Chaumont Bay which provides not only sport but commercial fishing opportunities; and Cranberry Creek Marsh on the St. Lawrence River. The area's fish resources not only offer fine recreation to the residents of the coastal communities but contribute to the area's economic life by attracting large numbers of sports fishermen from both the United States and Canada. For those interested in birds and other wildlife, the area has a wide array of opportunities for waterfowl hunting, or simply observing hundreds of species including such rare birds as bald eagles, double-crested cormorants, turkey vultures and red phalathropes. Of special note is the location of much of the area in the "flyway" used by thousands of migrating birds each year. Those important fish and wildlife resources are located not only in rural communities but in or near urban centers such as Buffalo and Rochester.

Unfortunately, those valuable natural resources continue to be subjected to intense pressures. Toxic substances released into the area's waters caused a temporary ban to be placed recently on the possession of certain Lake Ontario fish and have forced changes in stocking programs to more adaptable species. Wetlands, streams and other habitat areas are endangered by development which directly interferes with the life cycle of species or lowers water quality below that necessary for their optimum production. In many places, access to harvest or observe those species is limited. The Coastal Management Program is concerned that that those problems prevent coastal residents from taking full advantage of the resources and thus reduce the contribution of the tourist industry to the area's economy. State programs controlling water pollution, protecting freshwater wetlands and streams, and those aimed at providing greater access to the resource will be fully utilized to improve those conditions. In addition, one of the Coastal Management Program policies provides for a clearer delineation of significant fish and wildlife habitats which will lead to better management of those areas.

Erosion is a coast-wide problem but it is more severe on Lake Ontario and on sections of the St. Lawrence River because the shorelands thate are composed mainly of vulnerable glacial soils. As the land is undercut, buildings gradually topple onto the beaches or into the water. Many structures, built at great expense to protect the shore, prove to be of faulty construction; in some cases they cause erosion on adjacent lands. The financial losses incurred directly and indirectly by both public and private interests are substantial. The Coastal Management Program will help reduce that economic burden by ensuring, through legislation, that critical erosion hazard areas are identified, that new and other facilities proposed for those areas are set back to minimize damage and that structures planned to prevent erosion are properly designed and built.

The Great Lakes area differs from the Hudson River and the marine coast in one important respect -- its waters are not subject to tidal movements. However, the levels of Lake Erie and Lake Ontario respond first to inflows not only from their own drainage basins but also from Lake Michigan, Lake Superior and Lake Huron whose waters eventually reach the sea through the St. Lawrence River. Water levels are also affected by how fast the waters can flow out of Lake Erie and Lake Ontario. In the case of the former, the depth of the Niagara River's existing channel limits the rate of outflow. Because Lake Erie in recent years has been at a level higher than the long-term average, studies are under way to determine the feasiblity of changing the Niagara River's channel configuration to allow more water to escape from the lake. On the other hand, Lake Ontario's outflow channel, the St. Lawrence River, was modified in 1958 for three purposes: to allow deep draft ships to enter Lake Ontario from the sea, to provide for the operation of hydro-electric power plants, and to permit a greater outflow from the lake. The International Joint Commission, through its arm, the International St. Lawrence River Board of Control, exercises control over the rate of outflow from the lake. In 1973, a severe storm, occurring during a period of very high water level, caused extensive shore property damage. Since then, coastal residents, fearful of the continuing high levels, have criticized the International Joint Commission for failing to take their interests into account. The Coastal Management Program will seek to ensure that riparian property interests are represented on the International St. Lawrence River Board of Control and that a study is implemented to investigate ways to improve regulation of the lake.

Recreation is recognized by the Coastal Management Program as a mauor concern in the area, not only as regards the extent of the resources but also their quality and the availability of access to them. State, county and local governments and the private sector are all suppliers of recreation resources. Forty state parks line the shores, placed to take advantage of such features as: scarce wide sand beaches on low-lying lands, as at Lake Erie State Park, Evangola State Park, Hamlin Beach and Selkirk Shores; areas of high quality as can be viewed from the cluster of state parks around Niagra Falls and the river gorge; and the unique juxtaposition of land and water in the Thousand Islands region where several state parks are sited. County and municipal parks and facilities, and those owned by private interests add considerably to the total number of resource areas. Despite this abundance, a number of problems remain. In the urban areas of Buffalo and Rochester, there are still pressing needs for swimming, boating and fishing opportunities. In some instances, resources exist, but because of poor water quality, prevent swimming. In Buffalo the New York State Thruway blocks access to shorelands reducing the opportunities of residents to enjoy the coastal resources.

The predicted expansion of interest in boating will impose greater demands on existing facilities which now are insufficient to satisfy needs in many areas, particularly on Lake Erie and Lake Ontario where the fisheries are attracting great attention. Because of the dangerous storms which can arise very quickly on both lakes, and the larger number of smaller craft being used by fishermen, more harbors of refuge are required in the area. Those and other recreation concerns will be satisfied by application of a number of state programs, particularly those under the jurisdiction of the Office of Parks and Recreation, and by county and local governments. The private sector role will be crucial and the Coastal Management Program will encourate private activity and ensure that competition between public and private facilities is avoided.

III.
Coastal Boundaries

Section III

COASTAL BOUNDARIES

Introduction

The Coastal Management Program has proposed statewide boundaries in accordance with the requirements of the Coastal Zone Management Act of 1972 and its subsequently issued rules and regulations. This has not been a simple task; New York is unique among the coastal states in the diversity of its "coastal areas" and "coastal waters." As indicated previously, the state's coastal area is comprised of distinct sectors: Long Island, a land mass fronting on the Atlantic Ocean, which exhibits strong land and water interrelationships; New York City, where the intensity of land and water uses is the greatest in the State; the Hudson River Valley, with a unique estuary and a tidal river that extends 140 miles into upstate New York; and the Great Lakes - St. Lawrence River region, a vast freshwater, non-tidal coastal system.

The proposed statewide coastal boundaries are delineated based on the following considerations which are consistent with federal requirements:

- Use of a single tier rather than a multiple tier approach;
- An operational definition of "direct and significant impact on coastal waters;"
- Location of designated Geographic Areas of Particular Concern;
- Use of an easily recognizable political/cultural feature as a landward boundary that encompasses "land and water uses of direct and significant impacts on coastal waters;"
- Preliminary boundary recommendations advanced by regional and local agencies; and
- Location of federally owned lands.

Boundary Determination Process

Federal Requirements

The Coastal Zone Management Act and the federal rules and regulations pertaining to it define a number of general and specific requirements that must be and have been followed in determining the proposed statewide coastal management boundaries. These regulations require:

- A determination of the inland boundary necessary to control, through the management program, shorelands, the use of which have a direct and significant impact on the coastal waters;
- A determination of the extent of the territorial sea, or, where applicable, of state waters in the Great Lakes;

- An identification of all federally owned lands or lands which are held in trust by the federal government, its officers and agents in the coastal area and over which the State does not exercise any control as to use;

- An identification of transitional and inter-tidal areas, salt marshes, wetlands; and beaches; and,

- A process whereby New York State has consulted with adjoining coastal states so as to minimize the possibility of incompatible uses occurring at the juncture of each state's boundary.

Boundary Activities in Preceding Program Periods

To satisfy the above cited requirements and to develop a uniform, common approach for delineating statewide coastal boundaries, the Department of State undertook three major steps. A paper entitled "Technical Guideline #1: Coastal Zone Boundaries" was prepared and circulated to the state, regional, and local agencies under contract with the Department to perform specific work tasks, including the determination of initial boundaries for their respective jurisdictions.

Regional and local planning agencies mapped in sketch form an initial coastal management boundary, using "Technical Guideline #1" as the basis for this activity. Also, the Department of Environmental Conservation, under contract with the Department of State, prepared a "Memorandum on a Statewide Coastal Zone Management Boundary." This document proposed a statewide boundary determination process based upon the work performed during the initial phase of the program by the various agencies.

In the second phase, several activities essential to the delineation of an initial statewide coastal management boundary were performed. In early 1977, the Department of State, with the assistance of the Department of Environmental Conservation, summarized the initial boundaries developed and recommended by the local agencies. Where available, information resulting from the second phase work was incorporated into this summary. Both state agencies also delineated the recommended boundaries on maps at scales of 1:24,000.

New York's Approach to a Statewide Coastal Management Boundary

The boundary-related tasks performed in the first and second years by the Department of State and other participating agencies led to the formulation of an approach for delineating a statewide boundary early in the third phase of the program. The approach consists of the development and application of several criteria as a means for delineating the proposed boundaries.

A description of the criteria which were developed in accordance with the federal requirements described previously and with respect to the nature of New York's coastline are as follows:

- One-tier - The statewide boundaries consist of only one tier, rather than multiple tiers with varying levels of land and water management. The one tier system facilitates program administration and reduces the complexities in delineating boundaries. In particular, the problems of determining the

location of boundaries between the tiers is eliminated. This criterion, however, does not prevent a municipality from establishing such tiers within the statewide boundaries for the purpose of managing coastal land and water uses beyond the level established by the State.

- Coastal Boundary as a Political-Cultural Feature - The nearest cultural feature or political boundary such as a road, railroad, utility right-of-way, municipal boundary, or a similar easily identifiable line is used as an onshore feature to delineate coastal boundaries so as to encompass those "land and water uses with direct and significant impact on coastal waters."[1] Such recognizable or known landmarks allow for a speedy determination as to whether a parcel of land lies within the state's coastal boundaries. Unelss otherwise indicated, the shoreward side of road, railroad or other right-of-ways will be used for the delineation of the landward boundary.

- "Direct and Significant Impact" - The boundary encompasses all those "land and water uses of direct and significant impact on coastal waters" according to the operational definition of "direct and significant impact" which New York State's Coastal Management Program has developed.[1]

- Geographic Areas of Particular Concern (GAPCs) - All identified and designated Geographic Areas of Particular Concern are included within the state's coastal boundary.

- Watersheds - Coastal watersheds extending many miles inland are not generally included within the boundaries. The exceptions, however, are whole and/or portions of those watersheds containing shorelands, the uses of which have direct and significant impacts on coastal waters, or upland areas which are necessary to properly manage such shorelands.

- Federal Lands - All program requirements pertaining to the exclusion of federally controlled lands in the state's coastal area have been followed.

- Buffer Areas - Where appropriate for aesthetic or other reasons, a landward buffer area of up to 1000' from the political/cultural feature which would ordinarily serve as a coastal boundary may be established. In such instances, the boundary will be described as a line up to 1000' landward from the identified political/cultural feature.

- Adjacent States - New York is coordinating with adjacent states to avoid the possibility of incompatible uses occurring at the juncture of adjacent coastal boundaries. Meetings have been held and information on boundaries and coastal uses exchanged, with the states of Connecticut, New Jersey, and Pennsylvania. To date, no conflicts have been evident. Continued attention will be paid to the coordination of efforts as the respective programs are finalized.

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1 "Direct and Significant Impact" is that impact resulting from land and water uses, which changes the physical, chemical, biological, littoral, aesthetic characteristics or socio-economic values of coastal waters to the extent that the character, use or availability of its resources and/or the environmental quality standards of the coastal waters are so adversely affected that they can only be maintained or restored at high cost to society.

. Local Agency Recommendations - The preliminary boundaries recommended by local agencies were incorporated to the greatest extent possible. Where appropriate, they were modified by the application of the preceding criteria.

Under the general rubric of the need for a direct and significant relationship between land and coastal waters in determining the landward boundary, more specific criteria were developed which reflect issues that are most important throughout the state. The following is a list of the criteria.

1. Fish and Wildlife Habitats - the Department of Environmental Conservation, as part of the Coastal Management Program, identified and mapped significant habitats throughout the state. Both the habitats in the state's waters' tributaries upstream to the first barrier to fish migration as well as those in the waters themselves were identified. This is a particularly important criterion because of the number and importance of both marine and freshwater fish species that spawn and/or live in the waters of the state and their tributaries.

2. Agricultural Lands - the boundary was extended inland to include areas of coastal dependent agriculture wherever that use was very intensive, covered a large contiguous area and there was a clear inland boundary, i.e. a change in land use. Urban areas within agricultural lands that do not have a direct or significant relationship to the coastline are excluded.

3. Visual Access Points - The boundary attempts to capture those avenues of visual access to the shore from public viewing points such as roads and public recreation areas. The ridge line that defined the limits of what could be seen from the Hudson River on its shore was used to include the river's most scenic areas, primarily the Hudson Highlands, and the Palisades.

4. Power Plant Sites - All existing steam-electric generating facilities of 50 megawatts or more, all sites for which application has been made to the State Siting Board to erect such a facility and all hydroelectric facilities, if they use coastal waters for cooling or generation, were included within the coastal boundary. If a site for which application has been made is rejected by the State Siting Board, the boundary will be changed so that the site is no longer included within the boundary.

5. Historic Sites - those historic sites which have a close association with the history of New York State's coast were included. Also included were small coastal villages which have historical relationships to coastal waters.

6. Industrial Areas - all areas of coastal dependent industrial activity and areas with known potential for such development were included, primarily areas zoned industrial and located adjacent to existing coastal dependent industrial areas.

7. 100 Year Flood Line - The area encompassed by this line, as identified by the Department of Housing and Urban Development under the National Flood Insurance Program, is the area most directly affected by the dynamics of the coastline. Where the 100 year flood plain is clearly coastal related, it is included within the boundary. This flood line becomes a significant boundary determinant on many of the downstream segments of creeks, around coastal bays, and along the shoreline itself.

8. Coastal recreation areas - Recreation areas along the coastline provide valuable access points to coastal resources, as well as strong recreation needs. Those coastal recreation areas that are not State Parks (already a generic category of GAPC) are included within the boundary in their entirety. These areas include municipal and county parks and beaches, fishing and boating access sites, and campgrounds.

If the areas that met the above substantive criteria did not have a clear and easily identifiable boundary, the coastal boundary was drawn along the nearest cultural feature such as a road; a railroad; a utility right-of-way; a municipal boundary; or other administrative boundary (e.g. a zoning or agricultural district boundary).

New York's Coastal Management Boundaries

Proposed Landward Boundaries

The boundary delineations proposed by local agencies have been the principal sources from which the state's landward limits are derived. Modifications were made in areas where local agencies' recommendations did not fulfill the criteria established for the statewide approach. In some instances, where a boundary had not been delineated by local agencies, the Department of State has developed recommendations that are in accord with the above identified criteria.

Detailed written descriptions of the proposed statewide landward boundaries are on file with the Department of State. These boundaries have been graphically delineated and are shown on a statewide map at the back of this report.

Proposed Seaward Boundary

The federal requirements regarding the seaward boundary are quite explicit. The water areas that must be included in the state's coastal area are as follows:

- The waters of Great Lakes outward from the shoreline to either the international boundary with Canada or the boundaries with adjacent states.

- Ocean waters outward from the shoreline to the three-mile limit of a state's legal jurisdiction or to the boundaries with adjacent states.

In accordance with these requirements, the Department of State has established the following proposed seaward boundaries:

- Great Lakes - St. Lawrence Area - Beginning with the Lake Erie Pennsylvania/New York boundary line, the boundary follows the international boundary through Lake Erie, the Niagara River, Lake Ontario and the St. Lawrence River to that point where the St. Lawrence River leaves the United States.

- Atlantic Ocean Area - Beginning at the New York/New Jersey state line, the boundary follows the state boundary in the Hudson River, Upper Bay, Arthur Kill and Raritan Bay to the three-mile limit of the territorial sea in the Atlantic, along the New York/Rhode Island boundary at Block Island Sound and the New York/Connecticut boundary of Long Island Sound.

Excluded Federal Lands

Program requirements indicate that New York State must either describe or map the lands owned, leased, held in trust or otherwise used by federal agencies. These lands are excluded by law from inclusion within a state's coastal boundaries.

New York State has identified all major federal land holdings; major holdings are shown on the statewide map contained in this report. Also a complete inventory of all excluded federal lands located within New York State's coastal boundaries is contained Appendix C. This inventory identifies the federal agency that has jurisdiction over the land, the name of the property, if any, the acreage, and the location by municipality and county.

Interstate Boundaries

New York State is also required by law to initiate communication with adjoining coastal states to manage common resources in a compatible fashion, or to minimize the possibility of incompatible uses occurring at boundary points.

New York has initiated efforts to coordinate its coastal boundaries with those of adjacent coastal states. Communication with the coastal management agencies of New Jersey, Connecticut, and Pennsylvania has yielded detailed information covering those state's respective boundaries and a commitment to coordinate them to the fullest extent possible.

Mapping

A map covering the entire coastal area of New York State, at a scale of 1:500,000 is included at the end of this report. The information provided on this map are the state coastal boundaries, the location of major excluded federal lands, and the location of site-specific GAPCs. More detailed maps, at a scale of 1:24,000 have been prepared and will be provided to local officials and appropriate planning agencies for their information and review. They contain the same type of information as the one included in this report.

IV.
Coastal Policies
and
Means of Implementation

SECTION IV

COASTAL POLICIES AND MEANS OF IMPLEMENTATION

Introduction

Only in recent years has man begun to fully understand the relationship between his use of land and water resources and the capability of these resources to sustain continued use. We now know, for example, that the disposal of sewage sludge and untreated industrial wastes in open waters decreases oxygen levels and reduces the water body's capacity to assimilate additional wastes. In addition, it makes the water body unattractive for neighboring residential development, seriously restricts use for recreational purposes such as swimming and boating, and destroys aquatic life. In recognition of such activity/capability interrlationships, this Program has identified types of land and water uses which significantly affect or are affected by coastal waters and which should be subject to statewide management.

The program centers on eleven coastal-related issues which have been identified as most crucial to the preservation and enhancement of New York's extensive shoreline: aesthetics, agriculture, air quality, economic development, energy development, flooding and erosion, fish and wildlife, impacts of Outer Continental Shelf development, public access, recreation and water quality.

This Section analyzes the pertinent coastal issues and establishes the basis for the program policies. Each issue is examined from the viewpoint of the coast's assets, problems and needs. Program policies are presented for each issue area. These policy statements address desired management practices relative to general and specific classes of land and water uses. For example, some economic policies are concerned with all land use and development in the coastal area, in general. Whereas, many policies speak to certain use, such as power plants, marinas and fish habitats, and their effects and location in the coastal area. For each policy, the available or the proposed means for implementing it is cited and outlined. A more extensive description of both proposed and existing state authorities (laws and programs) is given in Appendix B and Appendix G, respectively, of this report.

In addition to indicating what management practices are appropriate in the State's coastal area, the policies contained in this Section are of importance to the overall implementation of the Coastal Management Program. These policies will be utilized in determining whether federal and state actions occurring within the coastal area are consistent with the program. For this purpose, the stated policy and any explanatory text under it will be used in determining the consistency of a federal or state action. Further explanation of consistent state and federal actions is presented in Sections V and VI, respectively.

1.
Aesthetics

1. AESTHETICS

Issue Analysis

Of the shoreline's many resources, perhaps none is as universally appreciated as its aesthetic quality. Beauty is found in its natural scenery, architecture, historic sites, and cultural facilities. Ironically, it is those very aesthetic resources that are the most imperfectly understood, incompletely identified and infrequently considered in most planning efforts.

Traditionally, aesthetic resource studies have been concerned with natural scenery and the viewing points from which it is visible. The emphasis on natural resources results from the perception that natural landscapes are often more aesthetically pleasing than man-dominated environments.

However, in some cases, man has introduced changes to the natural landscape which have harmonized with, or indeed added to, the inherent aesthetic quality of the coast. Some man-made elements or man-modified landscapes, in addition to being positive visual images in themselves, may derive added value from historical or cultural associations. Historic sites, old fishing villages, rolling farm landscapes, and dramatic city skylines lend character and human interest to coastal landscapes.

Three characteristics common to all coastal scenes generally contribute to aesthetic quality: the presence of water, the dynamics of the land/water interface, and expansive views. This suggests that coastal landscapes, even the more common or ordinary, possess inherent aesthetic attributes which, if managed properly, can provide aesthetic enjoyment for the viewer.

Beyond, their inherent worth, these aesthetic attributes enhance other values. For instance, they augment recreational attractions helping to make the coast a prime location for vacationers. In some areas, scenic qualities add to the existing or potential economic value of tourist and recreation industries. Finally, historic and architectural resources combine aesthetic and educational values.

The importance of protecting and enhancing aesthetic quality for recreational, psychological, economic and educational purposes has long been recognized. Recently, coastal aesthetic quality has been given greater importance by its explicit inclusion in the Coastal Zone Management Act of 1972. The following passage stresses this role (from Section 302 (b)):

> "The Congress finds that the coastal zone is rich in a variety of natural, commercial, recreational, industrial, and aesthetic resources of immediate and potential value to the present and future well-being of the Nation."

In addition, states are encouraged to give "full consideration to ecological, cultural, historic, and aesthetic values as well as to needs for economic development" (Section 303 (b)).

Siting and Design Practices

The benefits of aesthetic resource protection are great. However, these resources have often been degraded by development, which, through inappropriate siting and design, has violated their aesthetic integrity. Visually intrusive structures have been located in areas of high aesthetic value, thereby undermining their special qualities and their economic potential as well. Among the most glaring examples are utility structures, industrial plants, or other large-scale facilities sited in river gorges or within the viewsheds of scenic vistas.

A much more pervasive problem exists with respect to general development and design practices throughout New York's coastal area. Commercial strip development near beaches, inadequate landscaping or buffers around new development, and the use of building scales, heights, materials, and colors that are incongruous with natural landforms all degrade and sometimes obliterate, natural or man-made aesthetic quality. For example, the character of many old coastal villages has been destroyed by new development that is out-of-scale with adjacent structures.

Inappropriate siting and design creates another problem: the shoreline in general, and outstanding aesthetic resources, in particular, are often blocked from view by development. Visual access problems are especially great in urban areas, where the type and size of structures obstruct views to the shore. In rural areas, strip shoreline development creates a barrier to visual access.

Shorefront Conditions

The presence of visual blight, deterioration and pollution also has a profound effect on aesthetic appreciation. Again, the problems are most evident in urban areas. Many urban waterfronts are plagued with deteriorated buildings, littered beaches, and water and air pollution. Billboards, and other garish signs, transmission lines, and industrial structures create so much visual clutter as to make some areas very unattractive. In rural areas a major problem is the appearance of poor water quality caused by leaching septic tanks and leakage from outboard motors.

Coastal processes also take their toll by eroding natural aesthetic attributes, such as dunes and bluffs. While these processes result from natural forces, their destructive effects may be heightened by man's activities, such as channelization of waterways and the building of structures in flood and erosion-prone areas.

Uses of the Shore

Some types of large, visually intrusive facilities, such as marine terminals and energy facilities, require waterfront locations. Further, poor design of such structures as power plant cooling towers, may magnify the extent of that intrusion. The preference for residential sites with direct shoreline access has encouraged coastal sprawl, which often ignores natural landforms and contours and limits visual access to the shore.

Identification and Assessment of Aesthetic Resources

Aesthetic resource identification and assessment as it relates to land use and development decisions is a relatively new and complex field of study. There is general agreement on which features or areas possess outstanding aesthetic value, and which, conversely, are of low value. Perceptions vary still on those resources in the "middle range" which might actually be categorized as aesthetically valuable.

Varying perceptions lead to a lack of agreement on acceptable methods for defining and quantifying aesthetic values. This, in turn, has resulted in resources being unsystematically inventoried, or sometimes disregarded altogether. In the final analysis, aesthetic concerns are often passed over in favor of those other concerns perceived to be more readily quantifiable.

Program Policies

1.1 INVENTORY AESTHETIC RESOURCES OF STATEWIDE SIGNIFICANCE WITHIN THE COASTAL AREA

Information for this inventory will be obtained from state and local agencies. In particular, local agencies will be requested to provide nominations to this list as part of their local coastal management programs. Those aesthetic resources identified as being of statewide significance may then be designated as Geographic Areas of Particular Concern.

Aesthetic resources of statewide significance are broadly classed into three categories: outstanding specific features or sites; areas of high aesthetic quality; and scenic corridors and vistas. In some instances, all three types of resources may be exhibited in a given landscape. Both natural and man-made elements are accommodated in this framework including scenic, historic, architectural, archeological, and cultural resources.

Specific features and sites provide discrete positive images within a limited geographic area. Generally speaking, these resources exhibit one or more of the following characteristics: dramatic contrast with the surrounding landscape; visual evidence of natural or human dynamic forces; the presence of moving water; vividness of the feature itself in terms of color, form, scale, or texture; and strong edge definition.

Areas of high aesthetic quality provide a positive visual impression within a more extensive geographic area, without interruption from negative elements. Natural, man-made, and a combination of natural man-made elements may be included.

The third type of resource, scenic corridors (including roads and trails) and scenic vistas (expansive views), are significant in terms of man's relationship to his visual environment. Each of the features and areas described above will have a positive impact only if readily visible; scenic corridors, vistas and their viewing points expose these features and areas.

Criteria for identifying scenic corridors include quality of view in terms of scenic resources visible, design of the road or trail in terms of harmony with the natural landscape, and diversity of images. Criteria for the selection of vistas generally include quality of the view in terms of specific features visible, visibility of the shoreline, pictorial composition of the scene, accessibility to the viewing point from a public right-of-way, areal extent and lateral angle of view, and diversity of images.

A. State Means for Implementing the Policy

1. Protection of Natural and Man-made Beauty, ECL (Art. 49)

The law cited is the primary authority under which an aesthetic inventory of coastal resources can be undertaken. It specifically permits the Department of Environmental Conservation to inventory, study and survey the state's scenic and aesthetic resources.

2. Hudson River Study (Chapter 242, Laws of 1978)

Department of Environmental Conservation is authorized to undertake an inventory of the scenic and ecological resources of a large portion of the Hudson River and its shoreline. This inventory of scenic resources will contribute significantly to the state's inventory of aesthetic resources of statewide concern in the Hudson Valley.

3. Wild, Scenic and Recreational Rivers Program, ECL (Art. 15, Title 27)

Aesthetic resources identified along designated rivers within the coastal boundary will be incorporated in the coastal inventory.

4. Parks and Recreation Law (§3.09; 3.15; 3.21; 11.09; 13;27; Chapter 728, Laws of 1977)

The Office of Parks and Recreaton has general powers under Parks and Recreation Law, §3.09, which could be used to contribute to the inventory, since such powers relate to planning, encouragement and development of historic preservation, parks, and recreational and scenic areas. In addition, Parks and Recreation Law, §3.15 requires formulation of the Statewide Parks and Recreation Plan, which may serve as a further inventory means.

Parks and Recreation Law, §3.21, provides for preparation by the Office of Parks and Recreation of a plan for a system of urban cultural parks; this plan can be used to inventory aesthetic resources. Section 13.27 creates the Hudson-Mohawk Urban Cultural Park. Chapter 728, Laws of 1977, provides for preparation of a plan for this park area by the Office of Parks and Recreation and the Hudson-Mohawk Urban Cultural Park Commission. Again, inventory powers are included which could pursue this policy.

Parks and Recreation Law, Article 11, creates the State Board of Historic Preservation, which, pursuant to Section 11.09 could exercise inventory powers relative to historic preservation.

1.2 PRESERVE AND PROTECT AESTHETIC RESOURCES OF STATEWIDE SIGNIFICANCE WITHIN THE COASTAL AREA

In preserving and protecting aesthetic resources of all three inventoried categories, (i.e., specific aesthetic features, areas of high aesthetic value, and scenic corridors) the following guidelines must be considered: restrictions on physical alterations that affect the integrity of an aesthetic resource; encouragement of maintenance or enhancement of the resource; limitations on new development adjacent to an identified aesthetic resource if that development might degrade or block views of such resource; the screening or removal of existing development which is incompatible with an aesthetic resource; protection of land use patterns which enhance an aesthetic resource, e.g., the diversity of an urban waterfront; and the provision for and protection of vantage points, including regard for the quality of the foreground and for safety.

Within the coastal area the inventory will be the basis for subsequently establishing a priority system for the preservation and protection of the identified aesthetic resources.

Top priority would be given to resources that are recognized and maintained; that are currently accessible, at least visually, to the public; and that provide economic benefits. Lower priority would be given to resources which may not now be maintained, but which function in their present state as outstanding resources. Accessibility to the public is again essential. Still lower priority would be assigned to those resources which are not now developed nor accessible to the public.

A. State Means for Implementing the Policy

1. State Nature and Historic Preserve Trust, ECL,(Art. 45)

   Because this program provides for the acquisition and administration of lands and waters which should be preserved for their natural beauty, it will be used to acquire those areas which have been identified as aesthetic resources of statewide concern in the coastal area. The Environmental Quality Bond Act of 1972 (ECL, Art. 51, Section 51-0701) is the current major state funding mechanism to implement this acquisition program.

2. Wild, Scenic and Recreational Rivers Program, ECL (Art. 15, Title 27)

   Where rivers in the system are located inside coastal boundaries, Department of Environmental Conservation will promulgate river area management regulations which apply aesthetic guidelines to new land use and development in such river areas.

3. Tidal Wetlands Act, ECL (Art. 25)

   Since the preservation and protection of aesthetic resources is one of the considerations in the issuance of permits for regulated uses or activities in tidal wetlands, this Act will be used to implement this policy through the denial of permits for uses or activities which do not meet the guidelines for consideration of aesthetic resources in planning and development. 6NYCRR, Part GG 1.10, specifically includes aesthetic considerations among the permit issuing standards.

4. Freshwater Wetlands Act, ECL, (Art. 24)

The preservation and protection of aesthetic resources is one of the objectives. The regulations require the consideration of aesthetics in the permit issuing procedures.

5. Parks and Recreation Law (§3.09)

The cited law empowers the Office of Parks and Recreation to acquire lands for state parks. It has already been employed to acquire identified aesthetic resources of statewide significance and develop them as state parks, in such instances as the Niagara River Gorge and Chimney Bluffs in Wayne County.

6. Control of Outdoor Advertising, Highway Law, (§88)

This law provides for the control of outdoor advertising adjacent to the state's interstate and primary highways in part to preserve natural beauty. It is, therefore, an effective tool in preserving aesthetic resources of statewide significance which are situated near such highways.

B. Local Means for Implementing the Policy

Local government may employ any of the following techniques in implementing the above policy.

1. Regulation

Special zoning overlay districts could be made applicable to areas containing significant natural or man-made resources of statewide aesthetic significance. Within these districts new development could be made subject to design and other standards to protect the aesthetic qualities of the areas involved.

Through appropriate zoning district regulations, large-scale development which might intrude on aesthetic resources of statewide significance can be avoided; large-scale uses can be located inland from the shore unless waterfront location is required; and, site plan review or special permit review processes can be applied to protect views to the shore or to blend the design of new development with the coastal landscape.

Transfer of Development Rights (TDR) could be employed to provide for protection of aesthetic resources of statewide significance by transferring development rights to other areas of the municipality in order to protect areas of aesthetic value from incompatible development.

2. Acquisition

Localities may acquire fee or less than fee interest in lands identified as aesthetic resources of statewide significance. Such acquisition and necessary improvements would be in accordance with a local land use plan, and, where such have been adopted, municipal capital programs.

1.3 INCORPORATE AESTHETIC CONSIDERATIONS IN PUBLIC AND PRIVATE PLANNING AND DEVELOPMENT IN THE COASTAL AREA

This policy is based on the premise that the entire shoreline - not just specific resources of statewide significance - is potentially an aesthetic resource which, if properly planned and developed, can beneficially serve the people of the community and the State. A variety of landscape, townscape, and large-scale facility types occur along New York's shore which have unique aesthetic qualities and opportunities. Each type requires different planning and development considerations, if individual aesthetic potentials are to be realized.

To achieve an aesthetically pleasing coastal environment, aesthetic considerations must be incorporated into all planning and development decisions affecting the coastal area. Specific guidelines for particular landscape, townscape, or facility types must be generated at the local level. However, the Coastal Management Program will develop general guidelines for use by localities and state agencies. It should be understood that the appropriateness of any one guideline can only be determined after examining unique site conditions and the constraints on the project proposed. For instance, some of the guidelines could include considerations of this nature:

1. Natural Shorescapes

   a. Minimize the physical alteration of natural landforms, vegetative patterns, and other natural features.

   b. Locate new development inland from the shoreline, unless a shorefront location is required, and in conformance with site topography, shoreline configuration, and surrounding vegetation.

   c. Design new development to harmonize with the natural character of the area.

   d. Use plantings, topographic modifications, and other buffers to screen visually intrusive structures.

   e. Preserve the "aesthetic edge" along natural shorelines through such means as setback and height limitations.

   f. Maximize open space preservation through clustering of development.

   g. Protect views to the shoreline and the shore's aesthetic resources in all new development.

2. Townscapes

   a. Locate new development in or near existing developed areas and inland from the shoreline, unless a shorefront location is required.

b. Design new development to harmonize with existing community character, if it is deemed that the existing character has positive aesthetic quality.

c. Protect existing views to the waterfront and waterfront activities, and open up obstructed views, where feasible.

d. Use plantings, topographic modifications, and other buffers to screen visually intrusive structures.

e. Preserve remaining open space along the shoreline in settled areas, and provide additional open space opportunities, where feasible.

f. Upgrade the aesthetic quality of existing developed areas through the removal of debris, rehabilitation or removal of dilapidated structures, and the cleaning up of polluted waters.

3. Large-Scale Facilities

a. Avoid locating large-scale facilities in or near aesthetic resources of statewide significance. Whenever possible, locate large-scale facilities inland from the shore, unless a shoreline location is required.

b. Protect views to the shore and maximize open space preservation on the facility site.

c. Design structures that do not have operational design constraints, such as administration buildings, to harmonize with the existing character of the environment.

d. Use plantings and other buffer techniques to blend facilities with the surrounding landscape.

e. In urban areas, consider the use of bright colors and interesting graphics on large-scale facilities, such as oil tanks or cooling towers.

f. Promote the educational opportunities of large-scale facilities by considering tours through such facilities or visual displays of their inner workings. This approach might transform facilities previously considered aesthetically detrimental into cultural resources of public interest.

Court decisions in New York State have recognized aesthetics as a legal basis for the exercise of local police power: People v. Stover ((12 NY 2d 465 (1963)) and Cromwell v. Ferrier, ((19NY 2d 263 (1967))

A. State Means for Implementing the Policy

1. State Environmental Quality Review Act, ECL (Art. 8) (SEQRA)

Under the State Environmental Quality Review Act, state agencies and local governments are required to prepare an environmental impact statement for any action that may have a significant effect on the environment, including "important historical, archeological, architectural or aesthetic resources." In order to use the State Environmental Quality Review Act to help implement this policy, 6 NYCRR, Part 617.8 of the Act, which details the required contents of these impact statements, must be amended to require such statements to address specific aesthetic concerns when the proposed action affects property within the coastal boundaries.

2. Agricultural Districts Program, Agriculture and Markets Law, (Art. 25AA)

There is general recognition that agricultural land contributes to the aesthetic quality of many landscapes. Accordingly, the Legislature, in passing the Agricultural Districts Law, stated that "it is also the declared policy of the state to conserve and protect agricultural lands as valued natural and ecological resources which provide needed open spaces for clean air sheds, as well as for aesthetic purposes."

Specifically, the law provides that before any state agency or local government can exercise eminent domain or advance public funds within an agricultural district, the Commissioner of Environmental Conservation and the Secretary of State shall review the action to determine its effect on the preservation of agricultural and state environmental and comprehensive plans and policies. The Coastal Management Program will encourage the creation of agricultural districts as one means of conserving important farm lands in the State, and thereby preserving many of the state's scenic landscapes.

3. Protection of Natural and Man-Made Beauty Law, ECL (Art. 49)

State and local governments carry out many planning and development projects in the coastal area. This law will be one means of ensuring consideration of aesthetics as it provides for advice and assistance to local governments in developing and coordinating policies and programs with respect to natural beauty. In addition, the Department of Environmental Conservation is given the power to serve as a clearinghouse for information relating to the preservation and enhancement of natural and man-made beauty and to promote the application of aesthetic considerations in the location, design, construction, and maintenance of state lands, projects and buildings. Where appropriate, other state agencies should amend their program regulations and procedures to provide for the consideration of aesthetic concerns.

4. Utility Transmission Facility Siting Act and Power Plant Siting Act, Public Service Law,(Art. VII and VIII)

Power plants and transmission lines are highly visible and sometimes unwelcome intrusions upon scenic landscapes. These two legislative devices require that Certificates of Environmental Compability and Public Need be issued for major utility transmission facilities and steam-electric generating facilities. Aesthetic factors in utility planning and development are incorporated into Article VII and VIII deliberations. The Coastal Management Board will petitition to be a party to these proceedings to ensure that appropriate Program policies are considered during the decision-making process.

5. Mined Land Reclamation Act, ECL, Art. 23, Title 27)

Mined areas are often visual blights on the landscape. To help alleviate such visual blights, the Legislature has declared it to be a policy of the State to protect "the natural beauty and aesthetic values" in mined areas of the State. The Department of Environmental Conservation will include in the Mined Land Reclamation regulations requirements for both the mined land-use plan and the reclamation plan to address the listed coastal aesthetic concerns if the areas being mined are within the coastal boundary.

B. Local Means for Implementing the Policy

See techniques listed under Policy 1.2. In addition, two other local regulatory methods can be used. Under the site plan review process, communities can identify areas of aesthetic significance and require specified design standards for new development that may occur in those areas. Communities can also use cluster subdivision provisions to protect views to the shore.

Section 96-a of the General Municipal Law empowers counties, cities, towns and villages to provide by regulations, special conditions and restrictions for the protection, enhancement, perpetuation and use of places, districts, sites, buildings, structures, works of art and other objects having a special character or special historical or aesthetic interest or value.

1.4 INCREASE VISUAL ACCESS TO AND ALONG THE SHORE AND PROTECT EXISTING POINTS OF VISUAL ACCESS

A. State Means for Implementing the Policy

1. Transportation Law (§14a)

Often the observation and enjoyment of the shore occurs while traveling. This law is important because it directs the Department of Transportation to cooperate with other state agencies to include in transportation programs measures to maintain or enhance the desirable natural characteristics of the land traversed.

2. Highway Law (§20, 21, 22)

Visual access is often obtained from the roadside. These laws provide for the acquisition of property for highway rest areas (§20), for the restoration, preservation, and enhancement of the natural or scenic beauty of areas traversed by state highways, (§21), and for recreation, natural, scenic, and multi-use areas along, but not necessarily contiguous to, state highways, (§22).

3. Urban Cultural Park System, PRL (§3.21)

Views of urban waterways are an important element in the aesthetic quality of coastal cities. The state's Urban Cultural Park Program provides a means to protect or enhance these views through the development of a system of urban cultural parks.

4. Acquisition, PRL (§3.09, 31.17), ECL (Article 45), ECL (9-0501)

The cited laws are examples of a variety of state legislative acts providing for land acquisitions which can be employed to provide increased visual access to the shore.

B. Local Means for Implementing the Policy

1. Regulation

There are a number of regulations that municipalities can employ to implement the policy. Zoning can be utilized to protect existing visual access corridors to the shoreline. Specific provisions to be used include: clustering of development; setback and height limitations on structures between public viewing points and the shore; sign controls on coastal roads; and the designation of areas for open space uses between public viewing points and the shore.

2. Acquisition

New York's municipalities are empowered to acquire scenic easements over private property. Such easements can provide visual access corridors as well as physical access to the shore. In addition, communities can acquire fee interest in lands that provide points of visual access.

2.
Agriculture

2. AGRICULTURE

Issue Analysis

Agriculture is New York's largest single industry, with 1976 sales of $1.7 billion.[1] Dairy farming accounts for more than 50% of these sales.[2] Fruit and vegetable production, the second largest source of income, accounts for 13% of the total. To produce this wealth, New York farming occupies 8.3 million acres; 35% (2.9 million acres) are in the coastal counties. These counties are the primary location of the state's important fruit and vegetable farming, which in 1974 had a market value of $185.5 million.

While only a small portion of the agricultural land in coastal counties is devoted to fruit and vegetable farming, it produces nearly 10% of the total market value of all agricultural products produced in New York State. Because of the positive climatic influences of coastal waters, most of this farming, particularly that devoted to fruit, is concentrated in areas immediately adjacent to the coast.

Loss of Agricultural Lands

Though loss of farmland to more intensive development remains a problem, the trend has apparently slowed, with the loss decreasing to only 1% between 1969 and 1974. Loss of farmland within coastal counties declined 2.3%, but the decline has not been uniform throughout the coastal area. In Chautauqua County, for example, land in orchards increased by 18%, while in the counties along Lake Ontario, the Hudson River, and on Long Island, declines ranging from slight to significant were recorded.

Urban development, as it expands outward into farming areas, is the major cause of farm loss. In addition, land goes out of farming at the urban/rural fringe for the following, often interrelated, reasons: 1) Farming is dependent on nearby agribusiness enterprises; these, in turn, require a minimum number of active farms. Once a certain number of farms cease production and the level of agribusiness is reduced, the economic viability of the remaining farms is in question. 2) The proximity of an urban labor market begins to provide alternative employment opportunities to farmers and farm laborers. 3) In urban/rural fringe areas, local ordinances often restrict farm operation. And, 4) declining or low net farm income and high inheritance taxes are factors in the loss of farmland.

Impact on Water Quality

While the significance and magnitude of agricultural activities as sources of water pollution is not fully known, the types of water quality problems that can be associated with agricultural activities have been identified. Sedimentation and nutrient enrichment are two such problems. Sedimentation silts up fish

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1 New York Crop Reporting Service, New York Agricultural Statistics, 1976.

2 Unless otherwise identified all data is from the 1974 U.S. Census of Agricultural and is for farms with sales of over $2,500.

spawning beds and fills crevices in which invertebrates eaten by fish would hide. It also cuts down light penetration, reducing the productivity of the water, and thus the food for fish. Fish population declines, and ultimately lessens the opportunities for sport and commercial fishing. Recreation opportunities in turn, are reduced, because the turbid water is unattractive. Sediment may also act as a carrier of pesticide residues. Modern farming practices call for the use of large quantities of fertilizers, and runoff can carry nitrogen and phosphorus into coastal waters, accelerating the process of eutrophication. Animal wastes can also result in excess nutrients in coastal waters. Though agriculture is a source of water pollution, the degree of its significance and the circumstances under which it is a source are not precisely known.

It would be premature to advocate a precise, comprehensive policy addressing this issue. There is some potential for conflict between the objectives of preserving agriculture and controlling rural non-point sources. The degree of conflict will depend on the as yet unknown significance of different agricultural practices as sources of non-point pollution and the specific proposals for controlling these non-point sources made by '208' plans. (See Policy 11.5 in the Water Quality section).

Definition of Important and Valuable Farmland

Different approaches to identifying important farmland have been taken. Howard Conklin's study[3] identified farms based on high, medium, and low economic viability. The State Development Plan - 1[4] restructured this identification into categories referred to as exceptional, high viability, and medium viability farming areas. The Soil Conservation Service identifies soils according to several categories of capability and also has a system of identifying important farmland as prime, unique, or of statewide or local importance. However, in a report prepared for the state '701' Land Use Element, the Agricultural Resources Commission recommended that "No one all-encompassing definition of important farmlands is practical or desirable." Rather, the Commission recommends that agricultural land use policy be based on various combinations of information about soil quality, economic viability of farming, climate, and existing land use patterns. This recommendation is perhaps the best approach and will be the type of approach taken by the Coastal Management Program. Therefore, for the purpose of the Coastal Management Program, important farmland is defined as: 1) those lands which meet the United States Soil Conservation Service's criteria as being prime, unique, or of statewide importance; 2) active farmland within Agricultural Districts; or 3) agricultural areas identified as having high economic viability.

Program Policies

2.1 CONSERVE ALL IMPORTANT AGRICULTURAL LANDS IN THE STATE'S COASTAL AREA.

Where lands have been identified as important agricultural lands, agricultural use will be given the highest priority. However, since the land that is included within the definition of important agricultural lands ranges from areas of coastal dependent agriculture (e.g., orchards) on prime soils conducted on farms with high economic viability and within

3 Howard Conklin, The Nature and Distribution of Farming in New York State, New York State College of Agriculture, 1968

4 New York State Office of Planning Services, New York State Development Plan - 1, 1971, p. 48.

defined agricultural districts, to areas of prime soils not now being farmed, the priority accorded agricultural uses over other uses will vary from absolute to 'other things being equal.' Thus, in the case of the first example (or whenever, say,two or more of the following characteristics: coastal-dependent agriculture, high economic viability, agriculture district, or prime soils are present) the priority given agricultural uses is such that no other uses would be permitted. On the other hand, the second example where areas of prime soils are not now being farmed, the priority accorded agricultural uses might be modified in favor of uses determined to be of greater regional benefit.

A. State Means for Implementing the Policy

1. Agricultural District Program, Agriculture and Markets Law, (Article 25AA)

The Agricultural District Law provides the primary means for the State to directly pursue a policy of conserving important agricultural lands. Most of the important coastal agricultural land is already included in agricultural districts. The provisions of the act which lead to the conservation of farmland include farm value assessments, limitations on the exercise of eminent domain, encouragement of farming by all state agencies, limitations on local ordinances that adversely affect farming and limitations on the power of public service districts to impose taxes. These provisions, plus the power given the State to create such districts where it would further state environmental plans, policies or objectives, constitute the basic state program for conserving all important farmland.

2. Farm Estate Taxes, Tax Law (§ 954-a)

Because of high land values and low estate exemptions, it has often been necessary for inherited farms to be sold to pay estate taxes. These sales were frequently made to developers, especially near urban areas. The cited law encourages the retention of land for farm purposes in two ways. First, it allows an exemption from estate taxes for any family-operated farm which has been inherited by a family member and which will continue to be operated for farming purposes. The first $200,000 in value of the property will be totally exempt, the second $200,000 will be taxed at the usual rate, and any value over $400,000 will be taxed at half the usual rate. Second, by establishing the property as farmland rather than as land for potential development, the calculation of estate taxes results in a lower figure.

3. Acquisition Power, ECL (3-0305) Highway (§ 21)

Some farmland is under particularly strong pressure and its retention will assist efforts to retain larger areas in farming. The purchase of development rights along certain highways and at certain interchanges could, for example, be used to help create a buffer area between urban type development and farm

areas. In the coastal area when fee or lesser interests in agricultural real property is acquired for purposes of ensuring that such property remains in agricultural use, priority will be given to agricultural lands identified in the Coastal Management Program.

4. Transportation Law (§ 14-a)

The likelihood of farmland remaining in farming can be strongly influenced by the location of transportation facilities. This law requires that the Commissioner of Transportation cooperate with the Commissioner of Agriculture and Markets to assure that measures to preserve farmland and the natural characteristics of the land traversed by transportation facilities are included in all stages of such projects.

5. Farm Land Preservation Act

A bill currently pending before the State Legislature would provide technical and financial assistance to localities for the development and implementation of programs to preserve farmland. Such programs could include zoning, transfer of development rights, purchase of development rights, purchase and lease back arrangements, and additional innovative approaches. Within the coastal area, the Coastal Management Program would assist in identifying priorities and could provide supplementary financial assistance for the administration of this program, thus allowing a greater percentage of state funds to be used for acquisition.

6. Federal Consistency

The federal consistency provisions of the Coastal Zone Management Act will be used to conserve important New York State agricultural lands. For example, federal agencies will not approve funding for acquisition of important farmland for conversion to other uses.

B. Local Means for Implementing the Policy

1. Regulation

Zoning ordinances can preserve valued agricultural lands. While zoning districts which permit only agriculture and its accessory uses are not common, they have been upheld by courts. Generally, in rural communities agricultural activities are permitted in all areas zoned for large lot residential use.

Transfer of development rights is a relatively recent technique for preserving agricultural land. Its appeal is that it combines use of police power with partial compensation, thus reducing the probability that a question of "taking" will arise. The technique has primarily been used as a way to preserve a valued low intensity or relatively uneconomic use of land (but one of importance because of physical, social, or economic

considerations) in areas where there is pressure from more intensive development. The public benefit derived from this technique is clear with regard to the land use or resource being preserved, because that preservation is accomplished without requiring an economic sacrifice by the owner. There are problems, however, in identifying those areas to which development rights will be transferred and in assuring that there is a market for these rights at those locations. The Town of Southampton on Long Island has already incorporated a form of transfer to development rights in its zoning ordinance for the express purpose of preserving agricultural lands.

2. Acquisition

Public purchase of development rights to agricultural land is similar to the technique for transfer of development rights. Its drawback lies in the need to appropriate substantial public funds for the purpose. Suffolk County has pioneered in the application of this procedure to the preservation of agricultural land. The authority for this type of program is found in the General Municipal Law, Section 247, which allows local government to acquire full title or lesser interest in lands to be preserved as open space.

3.
Air Quality

3. AIR QUALITY

Issue Analysis

All of the state's coastal areas are affected by federal and state policies to abate and prevent air pollution. The Coastal Zone Management Act reflects this concern, for it states that any air pollution control program requirements developed pursuant to the Federal Clean Air Act must be incorporated into the Coastal Management Program.

The Federal Clean Air Act establishes national air quality standards for six pollutants. These standards must be attained for officially designated "non-attainment" areas by 1982. A state may be granted an extension to 1987 for oxidants and carbon monoxide if it can be demonstrated that technological the achievement of the standards is not feasible by 1982. A revised State Implementation Plan containing control programs and the authority needed to achieve national standards will be submitted in early 1979.

Federal court decisions and act amendments now require that state implementation plans include strategies to maintain air quality standards in light of economic growth and development and to ensure that no significant deterioration in air quality occurs in "clean air" areas of the State. As a result, New York in revising its State Implementation Plan to meet significant deterioration and attainment requirements, will be broadening its traditional approach of "smoke stake" controls. Stringent siting requirements for many air pollution sources will make some locations, including coastal ones, unsuitable for certain types of activities and uses.

The State Air Pollution Control Program and the State Coastal Management Program must be coordinated to ensure that each can be effectively utilized to support mutually desirable objectives. New York State's air pollution regulatory programs, centered in the State Department of Environmental Conservation, can be enlisted to achieve coastal management objectives. At the same time, these programs could conflict with some other coastal management objectives such as those related to economic development. Coordination requirements are essential to develop and implement an effective coastal management program.

Major air quality management concerns in the coastal management area are grouped into four general categories. These are: the attainment and maintenance of national air quality standards as proposed in the State Implementation Plan; protection of clean air areas from significant deterioration; air pollution control problems in rural areas; and control of toxic discharges into the air.

Attainment and Maintenance of National Air Quality Standards

New York State will be submitting to the U.S. Environmental Protection Agency, by January 1, 1979, a revised State Implementation Plan for the attainment and maintenance of national air quality standards. The State Implementation Plan will cover the whole state with particular focus on coastal regions such as New York City and Lake Erie and the western part of Lake Ontario, areas in which air quality problems are especially severe. The policies, regulations and standards that the State adopts to meet federal mandates will have substantial impact on specific coastal land and water uses. Overall, the State Implementation Plan is likely

to be supportive of important coastal management goals and objectives. It will, however, necessitate consideration of air quality requirements in economic development programs promoted under the coastal management and other programs.

Protection of Clean Air Areas from Significant Deterioration

Traditionally, New York State's air pollution regulatory and management programs have focused on "smoke stack" controls to achieve air quality objectives. The 1977 amendments to the Clean Air Act require the State to protect "clean air areas" from significant deterioration by implementing regulations that classify all of New York into one of the three land area classifications based upon allowable deterioration of air quality. This program can be supportive of the overall coastal management environmental goal to preserve, protect, enhance, or restore natural resources. Proper classification can aid in the economic development goal by not unduly restricting industrial and related developments.[1]

Air Pollution Control Problems in Rural Areas

Air quality conditions outside metropolitan areas are generally good, and concentration levels for most pollutants are below national standards. Throughout the State, however, sulfur dioxide and ozone pollution from sources within and outside the state can adversely affect agricultural production. In Chautauqua County studies by Cornell University indicate that ozone may be affecting grape production. Additionally, "acid rain", resulting from multi-state airborne contaminants, is considered a significant contributor to the degradation of water quality in the Great Lakes and other upstate surface waters. Achieving important coastal management policies for agriculture, fish and wildlife, and water quality could be dependent upon improving air quality in rural areas of the state's coastal regions.

Control of Toxic Discharges Into the Air

Toxic discharges into the air, water and land are of major national and state concern. In New York, the presence of PCB's, Mirex and other toxic agents has critical public health implications as well as signficant impact on the use of the state's coastal resources for economic and recreational purposes. Unknown amounts of toxics are discharged directly into the atmosphere and will adversely affect the ability to achieve many important social, economic and environmental policies of the coastal management program.

Program Policies

3.1 LAND USE OR DEVELOPMENT IN THE COASTAL AREA SHALL NOT CAUSE NATIONAL OR STATE AIR QUALITY STANDARDS TO BE VIOLATED.

New York Coastal Management Program incorporates the air quality policies and programs developed for the State by the Department of Environmental Conservation. Coordination of the state's coastal management and air pollution programs will focus on insuring the required consistency. Mutual

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1 Under the law, all areas of the State are currently designated as Class II. The Governor can change this by redesignating areas, after following appropriate procedures, to the more stringent Class I category or more lenient Class III categories.

program review will concentrate on identification of the effect of each program upon the other; any adjustments that are required will reflect the primacy of national air quality standards. The State Implementation Plan will consider coastal land and water use policies. Conversely, coastal management land and water use policies and any recommendations with regard to specific locations and sites for major new or expanded industrial, energy, transportation or commercial facilities will reflect an assessment of their consistency with air quality requirements of the State Implementation Plan.

The Department of Environmental Conservation will allocate substantial resources to develop a regulatory and management program to identify and eliminate toxic discharges into the atmosphere. These efforts will be formulated and presented in a revised State Implementation Plan. The plan will identify the major management strategies to control the atmospheric discharges to toxics in all the coastal regions of the State. The State Coastal Management Program will be utilized to coordinate major toxic control programming efforts in the coastal regions and to support research on the multi-media nature of toxics and their economic and environmental effects on coastal resources.

A. State Means for Implementing the Policy

1. Air Pollution Control Act, ECL (Article 19), Environmental Quality Bond Act, ECL (Article 15, Title 5), and Hazardous Substance Act, ECL (Article 37)

   These laws provide the Department of Environmental Conservation with the regulatory authority necessary to control air pollution and makes funds available to control air pollution from certain public facilities. However, the Department of Environmental Conservation may need additional regulatory authority in order to meet Environmental Protection Agency State Implementation Plan authority requirements.

3.2 COASTAL MANAGEMENT POLICIES WILL BE CONSIDERED IN CLASSIFYING LAND AREAS PURSUANT TO THE SIGNIFICANT DETERIORATION REGULATIONS OF THE FEDERAL CLEAN AIR ACT.

The Department of Environmental Conservation will take into account the state and local coastal management programs concerning proposed land and water uses and the protection and preservation of geographic areas of particular concern, prior to any action to change significant deterioration land classifications in coastal regions or adjacent areas. In addition, the coastal management agency will provide the Department of Environmental Conservation with recommendations for proposed significant deterioration land classification designations based upon state and local coastal management programs.

A. State Means for Implementing the Policy

1. Air Pollution Control Act, ECL (Article 19)

This law provides the Department of Environmental Conservation with the authority to designate areas of the state based upon the degree of pollution that may be permitted. It allows the Department to consider that what may be proper for a residential area, for example, may not be proper for a highly developed industrial area.

4.
Economic Development

4. ECONOMIC DEVELOPMENT

Economic development is an all pervading concern in New York's Coastal Management Program, and economic development considerations are recognized and reflected throughout the other ten issue discussions —— most notably in the Agriculture, Energy Development, Fish and Wildlife, Outer Continental Shelf and Recreation discussions.

The following issues discussion and policies are intended to provide a general framework within which overall economic development decisions should be made.

Issue Analysis

Concentration of Development

The argument for concentrating development is based on increased energy efficiency, reduced cost of public services, more efficient use of existing infrastructure, increased likelihood of downtown revitalization, and improved protection of valuable natural resources.

The Program considers the concentration of development to be crucial in coastal areas because, in the first place, development pressures there are more severe, and in the second place, the unique natural functions performed by coastal areas are critical to attaining both a sound economy and a sound environment.

The issue faced by the Program is how to accomplish concentrated development, not with a negative approach that merely restricts development, but by adopting a positive approach that seeks to stimulate development where it would be desirable.

Underutilization of Waterfront Space

The movement of people and commerce from inner city to suburb is most clearly manifested in the underutilized, sometimes abandoned, sites found along urban waterfronts. Outdated physical plants, the need for more space, increased reliance on trucking, deteriorating surrounding neighborhoods, spiraling property taxes, and financial incentives provided by suburban counties and other states, are some of the reasons for the alarming reduction in manufacturing and commercial activity along New York State's urban waterfronts.

The Program seeks to reverse this negative trend so that urban waterfronts can reassume their position as the focal points of coastal communities.

Competition for Space

Although much of the state's coastline is underutilized, some areas are subject to intense use pressures. The reasons a particular site becomes desirable for development vary, but are generally related to such factors as topography, local climatic and soil conditions, access to transportation, aesthetic value, and surrounding land uses. Unfortunately, where there is competition for a particular site the market mechanism and existing regulations do not always ensure that the

public interest will be served. For example, the preservation of agricultural land is held by the State Constitution to be in the public interest. Despite this, agricultural land continues to be converted to urban-type uses because such uses offer the likelihood of greater profits.

The obligation of the Coastal Management Program is clearly to serve the public interest, not short-range profit-making, and thus, the task becomes one of determining which uses should receive priority treatment in the coastal areas, and what form that treatment should take.

Incompatible Adjacent Uses

Because certain areas are desirable locations for a number of uses, a situation often develops where incompatible activities are forced to locate next to one another. An example of this would be in port areas where heavy industrial uses may lower air, water and visual quality, and raise surrounding noise levels, with a consequent reduction in the enjoyment of those people who are participating in nearby recreation activities. Recreational uses within harbor areas, on the other hand, can inhibit port development by restricting industrial expansion, forcing port interests to alter dredging operations, interfering with shipping movements, or by creating safety hazards.

When incompatible uses are located adjacent to one another, the Coastal Management Program, in conjunction with other state and local programs, is faced with the task of mitigating the negative aspects. Where new development is taking place, steps must be taken to ensure that adjacent uses are compatible and, preferably, supportive of each other.

Transportation/Port-Related Issues

State transportation policies have a substantial role in shaping the course of development. Following are those transportation issues which have particularly important implications for the Coastal Management Program:

A. Consequences of Major Transportation Improvements

Most of the state's planned transportation system is already in place. However, significant new developments or modifications may occur in the future. Such improvements would probably bolster the economy of an area but negative consequences are also possible insofar as another area might be put at a competitive disadvantage, unplanned growth might be precipitated, or serious environmental problems might be caused.

B. Access to the Waterfront

While the state's coastlines have served as natural corridors for highways and railroads, the coastlines have frequently been made inaccessible by the existence of these same transportation facilities. For the most part, the damage is done and is, for the foreseeable future, irreversible. However, where new facilities are being planned and where existing facilities do not pre-empt use of the shoreline, opportunities to increase public access can

be accommodated if cost and safety considerations are not prohibitive. This issue is further discussed in the Public Access issues section.

C. Competition Between Transportation Modes

Relationships among the various modes of transport (particularly the relationship between rail and ship) will vary according to circumstance. In many cases, rail and ship lines are mutually supportive as in Oswego, where the local Port Authority opposes the abandonment of the Erie-Lackawanna rail line, and as in New York Harbor, where rail service will be re-established on the Brooklyn waterfront with the objective of enhancing general port activity. In other situations, various modes of transportation may directly compete with each other, and state supportive action in favor of one may have negative effects on another. The State must encourage a relationship between the various modes of transportion that is based on healthy competition, if not mutual support.

D. Friction Between Shipping and Non-Transportion Uses

The shipping industry's increasing need for space, new public sensitivity to environmental damage, and public demand for increased recreational opportunities, together serve to inhibit industrial development in harbor areas. The Coastal Management Program must address this problem of competition for space in harbor areas.

E. Navigation Problems

Increased dredging of harbor areas and rivers is a necessary component in any long range improvement of the state's water transportation facilities. The depth to which the channels should be dredged, the precise location of the channels, and the manner in which the dredge spoils should be disposed of, are problems that must be addressed. Dredge spoils are further discussed in the Water Resources issue section.

Another navigation problem concerns the extension of the winter navigation season on the Great Lakes and St. Lawrence Seaway. Proponents of winter navigation point to expanded winter navigation as an important asset in attracting port commerce. Opponents contend that the ice breaking process would be environmentally damaging, that the operation of area hydroelectric plants might be interfered with, and that the economic benefits of the extended season may not be as great as claimed by winter navigation proponents.

The problem of debris floating in New York Harbor and the Lower Hudson is discussed in the Flooding and Erosion section.

F. Barge Canal

The Barge Canal is in poor structural condition and is failing to fulfill its role as a transportation, flood control, water supply and recreation facility. Three options open to the State are 1) to continue the present level of maintenance, 2) to increase funding of the system so that a minimal level of service can be attained, 3) to make a major capital investment in the system with the objective of opening the waterway to oceangoing vessels.

Program Policies

4.1 GIVE LOCATIONAL AND FUNDING PRIORITY TO WATER-DEPENDENT AND WATER-ENHANCED ECONOMIC ACTIVITIES.

While there is a growing demand by economic activities for waterfront locations, only a finite amount of waterfront space is available. In response to this situation, the Coastal Management Program seeks to ensure that activities which depend upon being adjacent to the water, and secondarily, those activities which are appreciably enhanced by being adjacent to the water, will have waterfront sites available to them. Of course, future oriented allocation of space is difficult to accomplish because of the vagaries of the market place (especially with respect to port areas, where major decisions are sometimes tied to one company's location and transportation plans). Implementation of this policy will therefore be flexible. For example, within designated sites the Program will give water dependent uses preferred treatment but if the market indicates no demand for space by water-dependent uses, other uses will be promoted. In those cases where water-related activities do receive favored locations, non-water related activities will be encouraged to locate inland or on other coastal sites where competition for space from water-related uses is not anticipated.

A. State Means for Implementing the Policy

1. Proposed Water-Dependent Development Legislation

This legislation would ensure that within coastal cities there would be designated areas wherein locational priority would be given to water-dependent uses. A coastal city would have first option for developing an implementation program. If a city did not develop a satisfactory program, responsibility for implementation may shift to the county. If the county failed to act satisfactorily, responsibility for implementation would shift to the Coastal Management Board.

In addition to this mandatory approach with respect to coastal cities, the legislation allows for voluntary participation by towns and villages.

2. Proposed Article 40 of the Executive Law

Through state consistency the Coastal Management Board, as the state's 306 agency, will encourage state grants and loans and state capital planning support for water-related projects

The Board will also provide localities with assistance in preparing general land use regulations favorable to water-related activities.

3. Federal Consistency

The Board will support federal grants and loans for water-related projects which are to be undertaken in designated water dependent use areas.

B. Local Means for Implementing the Policy

Coastal municipalities can employ zoning regulations, capital facilities programming, financial incentives, or eminent domain, in ways which would support the development of water-related activities.

4.2 CHANNEL GROWTH WITHIN THE COASTAL AREA TO ALREADY-DEVELOPED AREAS.

Through its construction, taxing, funding and regulatory powers government has become the dominant force in shaping the course of development. The Coastal Management Program will monitor all government actions having significant development implications for the coastal area. Governmental agencies will be encouraged by the Program to take only those actions which reinforce the basic goal of concentrated development. Of course, this policy does not call for the exclusion of all development from undeveloped areas. It does, however, set a clear goal which will be pursued vigorously.

A. State Means for Implementing the Policy

1. Article 40 of the Executive Law

This proposed new legislation will be employed to ensure that state actions, e.g., capital facilities construction, funding programs, sale or purchase of property, are undertaken in a manner that reinforces the concept of concentrated development.

2. Transportation Law (§ 14, 18)

This law gives the State Department of Transportation overall regulatory, acquisition, construction, and funding powers necessary to implement state transportation policies. The Department of Transportation policies, as expressed in the statewide transportation master plan, give priority to increasing use of existing facilities and, in particular, to the strengthening of the role of public transit. Collectively, the Department of Transportation's policies will serve the Coastal Management policy favoring concentrated development.

3. Parks and Recreation Law (§ 3.09 and § 3.15)

Section 3.09 is the basic law by which the Office of Parks and Recreation is given the power to acquire, establish, operate and maintain state parks, parkways, and state recreation facilities. Section 3.15 provides for a State Comprehensive Recreation Plan. Included in that plan is a priority system for allocating funds for public parks and outdoor recreation acquisition, development, and rehabilitation projects. Under this system each open space/natural resource is given a rating for need based on the degree of urbanization of the project

area. Priority increases as the population density increases.

4. State Water Quality Management Program

The Bureau of Water Quality Management, within the Department of Environmental Conservation, is responsible for developing a state 208 plan, a mechanism by which the State will meet its domestic sewage treatment needs. Plan implementation will give priority to the construction of facilities in urban areas.

5. New York State Land Use Element[1]

As approved by Governor Carey, the Land Use Element calls for a "concentrated pattern of development (that) would not only utilize existing services and facilities to their fullest capacity but would reduce growth pressures on valuable open lands and resources. Thus, both the economic vitality and environmental quality of the State would be improved." The Land Use Element will be used to guide the state's funding and capital facilities decision-making processes.

6. Federal Consistency

This concept will be employed to support those federal actions, e.g. funding programs, sale or purchase of property, which reinforce the concentration of development.

B. Local Means for Implementing the Policy

Coastal communities can employ zoning regulations, capital facilities programming, financial incentives, or eminent domain as means of encouraging the concentration of development.

4.3 ENCOURAGE DEVELOPMENT WHERE GEOLOGICAL, TOPOGRAPHICAL AND OTHER ENVIRONMENTAL CONSIDERATIONS ARE FAVORABLE.

The proper siting of development, with regard to environmental considerations, will serve to strengthen the state's economy by 1) reducing the cost of governmental services, e.g. flood control, erosion protection, which result from poor land use planning, 2) eliminating permit delays, bad publicity and damage mitigation costs borne by the developer who builds on environmentally significant sites and 3) allowing environmentally significant sites, e.g., wetlands, prime soils, beaches, to perform those unique functions which are required by critically important industries (fishing, agriculture and recreation, respectively).

Factors that will be considered when assessing whether a site is suitable for development include the degree of slope, depth of bedrock, soil conditions, vegetative cover, groundwater characteristics, and local climatic conditions.

1 New York State Land Use Element, Department of State, 1978, p. 25.

A. State Means for Implementing the Policy

1. Article 40 of the Executive Law

This proposed legislation will allow for state technical and financial assistance to localities for the preparation of land use regulations that reflect the development considerations listed above. The Board will, in fact, supply localities with much of the land use data upon which sound land use regulations should be based.

In addition, state consistency will be employed to encourage state agencies to favor the development of those sites where development is environmentally suitable.

2. State Environmental Quality Review Act (ECL, Article 8)

Under this portion of the Environmental Conservation Law, environmental impact statements may be required for a variety of projects, so as to determine if any adverse effects will result. The findings contained in such statements will assist decision-makers in determining whether or not projects should be approved.

B. Local Means for Implementing the Policy

1. Regulation

Municipalities can employ zoning regulations, site plan approval regulations, permit procedures, and performance standards to implement this policy.

4.4 EXPEDITE PERMITTING PROCEDURES TO FACILITATE THE SITING OF ECONOMIC ACTIVITIES AT LOCATIONS IDENTIFIED BY THE COASTAL MANAGEMENT PROGRAM AS DESIRABLE FOR DEVELOPMENT

Burdensome permitting procedures have been identified as a major impediment to new physical investments in the State. The Coastal Management Program will assist in the state's overall effort to simplify present permitting procedures.

A. State Means for Implementing the Policy

1. Article 39 of the Executive Law

This legislation creates the Office of Business Permits. The Office "will provide comprehensive permit information, one-stop service for permit applicants, and the coordination of permit processing and review." (§ 875 (3)).

The Coastal Management Board will work closely with the Office of Business Permits by preparing a list of those coastal sites which can accommodate intensive development. The list of sites is to be used to facilitate the "conceptual review" of a permit application (the conceptual review by relevant state agencies provides the applicant with

an early but non-binding assessment of a project's acceptability). Eventually, the identification of desirable development sites will be a tool for use in local and state economic development efforts. A site's inclusion on the list would indicate to an industrial concern that (a) there exists a high likelihood that intensive development on the site is acceptable to the State (b) the existing infrastructure can accommodate industrial expansion (c) there are no substantial geological or topographical constraints and (d) a proposal to develop the site would receive expeditious review by state agencies.

B. Local Means for Implementing the Policy

The General Municipal Law, General City Law, Town Law, and Village Law grant municipalities land use control powers and attendant powers to issue permits in the areas of zoning, subdivison regulation, building code enforcement, and environmental regulation.

4.5 PROMOTE NEW YORK STATE'S MAJOR PORTS AS CENTERS OF COMMERCE AND INDUSTRY.

The Coastal Management Program intends to act directly and in a positive manner with the state's major port areas. Three economic policies already discussed; namely, water dependency, concentration of development, and the expediting of permit reviews, have positive implications for port development. Additionally, and with specific reference to port development, the Program will:

- call for no change in existing port authority functions and responsibilities.

- contribute, through the operations of the Council of Upstate Ports, to coordination among the state's ports.

- support or oppose any proposal to develop a new major shipping port based on the proposed project's predicted impacts on the immediate site, the surrounding region, and the state's overall transportation efficiency.

- encourage state and federal agencies to give port authorities first option to purchase adjacent or nearby surplus government land that is needed for port purposes.

- support increased funding for the State Barge Canal System so that, at least at a minimal level, the System can function in its capacity as a transportation, recreation, water supply and flood control facility.

- participate in any new state decision as to whether or not testing of winter navigation on the St. Lawrence Seaway should proceed.

- encourage port districts to increase public access opportunities or otherwise make unused port-held land available for non-industrial uses (even if only on a temporary basis).

A. State Means for Implementing the Policy

1. Implementation of Policies 4.1, 4.2 and 4.4, as discussed, would simultaneously serve the objectives of this policy.

2. Transportation Law (Article 2, § 14)

This law gives the New York State Department of Transportation overall responsibility for developing and carrying out New York State transportation policy.

3. Council of Upstate Ports

This Council, made up of representatives of the major upstate ports, acts to increase coordination among the ports and to increase cooperation between the ports and the State (state agencies, particularly the Department Commerce and Transportation, regularly attend meetings).

4. Article 40 of the Executive Law

State consistency will be employed to ensure that state agencies' actions are supportive of port development. Also, pursuant to this law, the Board may provide ports with financial assistance for necessary planning and access projects. Technical assistance will also be available to ports for purposes such as expediting permit procedures and developing plans to both increase public access and improve compatibility with surrounding land uses.

5. Federal Consistency

Federal agencies have been taking a more active role in port development. Federal consistency will be employed by the Board to support those federal agencies' actions, e.g., funding, regulatory decisions, acquisition of property, which advance port development in the state.

B. Local Means for Implementing the Policy

1. There are five port authorities set up under special legislation to promote and improve specific ports of the State. Citations are as follows:

- Ogdensburg Bridge and Port Authority. Public authorities Law, Article 3, Title 9, § 725-734.

- Port of Oswego Authority. Public Authorities Law, Article 6, Title 2, § 1350-1374.

- Niagara Frontier Transportation Authority (Buffalo). Niagara Frontier Port Authority was consolidated with this Agency in 1969. See Laws of 1969, Chapter 1024, § 1-5.

- Port Authority of New York - New Jersey (New York City). McKinney's Unconsolidated Laws, Title 17, § 6401-7152.

- Albany Port District Commission. Laws of 1925, Chapter 192.

4.6 ENCOURAGE THE DEVELOPMENT OF HARBOR AREAS TO MAXIMIZE THE ECONOMIC AND SOCIAL BENEFITS TO BE GAINED BY SURROUNDING LOCALITIES.

Many localities do not have sufficiently-sized staff or sufficient funds to provide, by themselves, the planning direction that could take advantage of development opportunities in smaller harbor areas. The Coastal Management Board will seek to fill this gap by providing localities with financial and technical assistance, and by coordinating state and federal activities so that the course of development sought by a given locality can be reinforced at all levels of government. In turn, the locality would be expected to give consideration to regional as well as local needs.

A. State Means for Implementing the Policy

1. Water-Dependent Development Legislation (see Appendix B)

Pursuant to this law, coastal cities are given some discretion in deciding which uses will be considered water-dependent. This legislation can therefore be employed by the locality to favor uses which support specific local development objectives.

2. Article 40 of the Executive Law

State capital facilities programming and state funding will, where possible, give support to the course of development chosen by the locality provided it has been found to be consistent with overall Coastal Management Program policies.

3. Federal Consistency

This concept will be employed to ensure that federal actions support the type of harbor development desired by the locality and region.

B. Local Means for Implementing the Policy

1. Acquisition and Regulation

Implementation will be accomplished at the local level under a variety of powers: eminent domain, zoning regulation, permit procedures, performance standards and capital facilities programming.

4.7 ENCOURAGE URBAN LOCALITIES TO UNDERTAKE WATERFRONT DEVELOPMENT PROJECTS.

Revitalization of the urban waterfront is one of the most effective means of encouraging economic development in the State, without consuming valuable rural and suburban open space. Waterfront redevelopment is also one of the most effective means of rejuvenating, or at least stabilizing, residential neighborhoods adjacent to the redevelopment area.

The priority accorded any given redevelopment project by the Program, will reflect the following:

- the commitment shown and need felt by the community.
- the likelihood of a good return on state and federal investment
- the degree to which the project relates to the water.
- the number of people that will be attracted to the waterfront by the project.

A. State Means for Implementing the Policy

1. Article 40 of the Executive Law

This law allows the Coastal Management Board to provide technical and financial assistance to localities undertaking desirable waterfront redevelopment.

The legislation will be relied upon to encourage water-related development activities by state agencies such as the New York Job Development Authority and the New York Urban Development Corporation.

2. Federal Consistency

The Board, as the State's 306 agency, will employ this concept assistance to support the provision of financial assistance from such agencies as Department of Housing and Urban Development, Economic Development Administration and the Heritage and Conservation and Recreation Service to localities undertaking desirable waterfront redevelopment.

B. Local Means for Implementing the Policy

1. Acquisition and Regulation

Implementation will be accomplished at the local level under a variety of powers: eminent domain, zoning regulating permit procedures, performance standards and capital facilities programming.

2. New York State Industrial Development Agency Act of 1969

This legislation provides for creation of local industrial development agencies. The agencies are "to actively promote, attract, encourage and develop economically sound commerce and industry through governmental action for the purpose of preventing unemployment and economic deterioration." This legislation provides an additional means by which the State can encourage water-related development.

5.
Energy Development

5. ENERGY DEVELOPMENT

Issue Analysis

New energy facilities represent a significant demand on the state's limited coastal resources. Due to their inherent operational characteristics, siting requirements, and the need for particular resources, a variety of energy uses are presently located in coastal areas. It is extremely likely that future energy facilities will depend on such coastal locations. Coastal waters will be necessary: for cooling purposes in steam-electric generating plants; for the production, transfer or transportation of raw or processed energy resources; as an essential component for the production of energy by hydroelectric facilities, including pumped storage; and, potentially for the economical production of electricity through the harnessing the wave and tidal actions

In certain situations, uses such as oil storage tanks, petroleum refineries or power plants with closed cycle cooling processes, access to coastal waters may be required, but a shorefront location for the facility is not essential. In a power plant site survey ordered by the Public Service Commission, the New York Power Pool[1] has investigated areas up to 20 miles from a major water body. Nevertheless, the Power Pool members currently have a total of 21,000 megawatts (MW) of steam-electric generating capacity within and only 1712 MW outside the state's coastal areas. By 1993, according to the recent long range plan submitted by the Power Pool, an additional 10,908 MW is scheduled to be installed at sites within New York's coastal areas.

In view of the competition among all types of uses for shorefront locations, the need for such locations or access to coastal waters must be a primary factor in the siting of future energy facilities, in conjunction with environmental considerations, public need, and construction and operation costs. Based on this need, and the Coastal Management Program's reliance upon existing state and local authorities to the maximum extent possible, the following discussion addresses the issues surrounding major energy facilities and resources and the siting processes that will be utilized in locating these future activities in the State's coastal areas. This discussion is presented according to the types of energy facilities or resources (other than those associated with Outer Continental Shelf activities) which are likely to locate in, be developed, or significantly affect the state's coastal areas.

Impacts of Electric Generation Facilities

The major environmental impacts of a hydroelectric facility are on the water course and the large amounts of land which it occupies. The quality, quantity and temperature of water as well as fish migration are affected when a free-flowing river becomes a reservoir. The changing water levels may have detrimental effects on biota and cause shoreline erosion.

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1 Members include: Central Hudson Gas and Electric, Con Edison, Long Island Lighting, New York State Electric and Gas, Niagara Mohawk, Orange and Rockland Utilities, Rochester Gas and Electric.

There are several significant impacts associated with the operation of fossil-fueled steam-electric generation facilities. The most serious potential impacts of these plants relate to air and water emissions, and waste disposal. Chemical sludge, some radioactive discharges (occurring naturally in fossil fuels) are discharged into the air and water during the operation of fossil fuel plants. Disposal of solid waste from coal fired units is also a serious potential problem. Thermal discharges of once-through cooling systems , particularly in the Hudson River estuary, can cause changes in the migration, spawning, embryological development and metabolic rates of certain aquatic life, as well as disturbing the normal chemical processes that occur within a water body. Impingement and entrainment of aquatic life is also a problem associated with once-through cooling systems.

Closed-cycle cooling systems can lessen some of these impacts, but, in turn, natural draft and mechanical draft cooling systems present another set of impacts such as noise, visual degradation and localized atmospheric changes, as well as increased facility costs, including a continuing requirement for a significant amount of energy to run the cooling system.

Nuclear-fueled generation facilities have environmental problems similar to those of fossil-fueled plants, but there is the additional concern of radio-active emissions. In the event of an accident, high-level radioactive emissions may escape into the air or coastal waters. Studies have estimated that the chance of the most serious accidental radioactive release, a core melt-down, to be one in twenty thousand per reactor year of operation. To date, actual experience of 200 reactor-years of operation has indicated no demonstrable adverse effect on public health.

In addition, significant social and economic impacts, both temporary and permanent, particularly in rural areas which often have inadequate labor pools, may result from the construction of major electric generation facilities. Further discussion of significant impacts of electric generation facilities is presented in Appendix F, "Generic GAPC Category - Existing and Potential Power Plant Sites."

Future Electric Generation Facilities

The following electric generation facilities have been proposed for New York's coastal areas.

A. Facilities that will be in service within 1-5 years include:

1. Long Island

   Under construction, a 820 MW nuclear fuel steam electric generating plant with a once-through cooling system at Shoreham by September, 1980.

2. St. Lawrence River and Eastern Lake Ontario

   a. Under construction, Oswego 6, a 850 MW fossil fuel steam electric generating plant to be completed by November, 1979.

   b. Under construction, Nine Mile Point No. 2, a 1080 MW nuclear fuel, steam electric generating plant with a natural draft cooling tower, to be in service by November, 1983.

B. Facilities proposed to be in service within 1-5 years include:

1. New York City

A proposed 700 MW fossil fuel, steam electric generating plant with a natural draft cooling tower on Staten Island at the Arthur Kill by November, 1984.

2. Great Lakes West

A proposed 850 MW fossil fuel steam electric generating plant with a once-through cooling system at Somerset by November, 1983.

C. Facilities proposed to be in service within 5-15 years include:

1. Long Island

Two proposed 1150 MW nuclear steam electric generating plants with once-through cooling systems at Jamesport by May, 1988 and May, 1990.

2. Hudson River Valley

a. A proposed 1200 MW steam electric generating plant with a natural draft cooling tower at Cementon by July, 1986.

b. Two proposed 1000 MW pumped storage electric generating plants at Cornwall, May 1992.

c. A proposed 1000 MW pumped storage electric generating facility at Prattsville by June, 1988.

d. Two proposed 1250 MW steam electric generating plants with natural draft cooling towers at Stuyvesant by May, 1991 and May, 1993 (alternative to New Haven).

3. St. Lawrence River and Eastern Lake Ontario

a. A proposed 1150 MW nuclear fuel steam electric generating plant with a once-through cooling system at Sterling by May, 1986.

4. Great Lakes West

Two proposed 850 MW fossil fuel steam electric generating plants with natural draft cooling towers at Pomfret on Lake Erie by November, 1987 and November, 1989.

D. Facilities proposed to be in service beyond 15 years include:

1. Hudson River Valley

Two proposed 1300 MW steam electric generating plants with natural draft cooling towers in the mid-Hudson area by May, 1994 and May 1996.

2. St. Lawrence River and Eastern Lake Ontario

A proposed 1300 MW nuclear fuel steam electric generating plant with a natural draft cooling tower at Nine Mile Point by May, 1995.

Impacts of Transmission Facilities

There are four major areas of concern surrounding the siting of electric transmission facilities: ecological impact, visual impact, land use impacts, and health effects.

Ecological impacts vary with terrain, degree of development, and the existence of environmentally critical areas in the right-of-way. Crossing steep, erodible slopes, wetlands, or other sensitive areas will increase the severity of the effects on coastal ecosystems, for vegetation cover is removed and service roads are constructed in order to install and maintain the transmission facilities.

Routing through developed areas will generally have less adverse aesthetic impact than through undeveloped areas. In scenic or historic areas, however, large transmission lines may be completely out of scale and lessen the visual quality of the area. In highly commercial or industrial areas or along existing rights-of-way, new power lines would generally be less visually obtrusive. In agricultural and undeveloped areas, new transmission facilities stand out in stark contrast to the natural landscape.

Certain experts have claimed that extra-high voltage transmission lines (765 KV) present hazards to health and the environment. The Public Service Commission has recently held hearings on the health and safety implications of such transmission facilities and has ordered special construction and operation measures to mitigate impacts identified in the hearings. The Commission also ordered the utilities to fund research and development projects to determine the biological effects of electric and magnetic fields generated by extra-high voltage transmission lines.

The major issue surrounding natural gas, petroleum and other fuel pipelines, and their associated facilities, is the physical alteration of the environment caused during construction and the safety of these facilities. The physical alterations may include removal and disposal of vegetation cover in rights-of-way, possible shoreline erosion of the water body that the pipeline crosses, increased surface runoff and stream siltation, damage to existing vegetation not removed, removal of excess soil excavated during construction, and potential deleterious effects on the water body's biota and quality. Pipelines crossing wetlands and scenic and wild rivers also pose potential serious impacts.

Future Major Transmission Facilities

The following electric, natural gas and oil transmission facilities may be located within New York's coastal areas.

A. Facilities proposed to be in service within 1-5 years include:

1. New York City

   A proposed underground 345 KV transmission line between Farragut and Hudson by 1982.

2. Hudson River Valley

   A proposed 345 KV transmission line in Westchester County between Buchanan and Millwood by 1982.

3. St. Lawrence River and Eastern Lake Ontario

   a. A proposed 765 KV transmission line in Oswego County between Nine Mile Point and Volney by 1982.

   b. A proposed 765 KV transmission line in Cayuga County between Volney and Pannel Road by 1983.

4. Great Lakes West

   A proposed 345 KV transmission line in Niagara County between Niagara and Ontario, Canada by 1981.

B. Facilities proposed to be in service within 5-15 years include:

1. Long Island

   A proposed 345 KV transmission line in Suffolk County between Jamesport and Holbrook by 1988.

2. New York City

   A proposed underground 345 KV transmission line crossing the East River between Dunwoodie, in Yonkers, to Steinway, in Queens, by 1993.

3. Hudson River Valley

   a. A proposed overhead 765 KV transmission line crossing the Hudson River south of Castleton-on-Hudson between New Scotland and Pleasant Valley.

   b. A proposed overhead 765 KV transmission line crossing the Hudson River at Athens between Athens and Pleasant Valley by 1986.

4. St. Lawrence River and Eastern Lake Ontario

   An overhead 765 KV transmission line crossing the St. Lawrence River at Robert Moses-St. Lawrence Dam between Massena and Ontario, Canada.

5. Great Lakes West

   Pipeline construction as a result of new gas wells in Lake Erie anticipated in the late 1980's.

Impacts and Future Types of Petroleum Facilities

The most important issue concerned with the use of coastal waters and adjacent lands for the production, storage or transportation of crude oil or petroleum products is spillage. In addition to the large oil spills which occur occasionally, due to groundings or collisions, there are frequent small spills which result from inadequate maintenance of transfer equipment, poor handling procedures, or illegal pumping of ballast.

The short-term impacts of such spills on marine and wetland ecosystems can be devastating. Marine food chains, fish, shellfish and wildlife are all affected by oil spills. These in turn have direct impacts on fishing and tourism industries.

Presently only one petroleum facility will be located in the State's coastal areas. This is the 35,000 BBl/day oil refinery currently under construction at the Port of Albany.

Impacts of Liquified (LNG) and Substitute Natural Gas (SNG)

Compared to other states, New York has a low per capita gas use, because the State's industries and utilities require relatively little of this fuel. Residential uses, which are considered as high priority users, are the principal consumers of this fuel.

Since the peak year of 1971, when 748 billion cubic feet (Bcf) were consumed, gas consumption in the State has dropped steadily. This decline is attributed mostly to curtailments of deliveries through the interstate pipeline system. Because of the curtailments, the gas utility companies in New York augment their supplies with, among other means, substitute natural gas (SNG) from naptha, and liquified natural gas from other states.

Due to the decrease in consumption, it is unlikely that new SNG facilities will be located in the State. Currently, two such facilities are in operation: one in Tonawanda and another in Greenpoint, Brooklyn. Liquified natural gas import facilities, on the other hand, may play an increasingly important role in supplying the state's future gas fuel needs in part, depending on federal pricing policies and federal policies relating to the nation's dependence on foreign energy supplies.

The principal issue surrounding liquified natural gas facilities is that of public safety. These facilities store large volumes of liquified gas at a temperature of -260°F. The gas is not explosive or flammable when stored in this state and at this temperature. The gas does vaporize rapidly, however, upon contact with atmospheric pressure and temperature. Upon mixing with oxygen in certain proportions, it becomes highly flammable (natural gas is flammable when it comprises about 5 to 15% of the total volume of air in a given area).

Should a rupture of an onshore storage tank or tanker ship occur, a natural gas vapor cloud would form. The hazard presented by such a cloud upon ignition would depend on the amount of escaped gas, the wind conditions, and the degree to which the cloud has dispersed before ignition. Once ignited, the gas would burn back to the source, emitting intense heat which could ignite combustible materials within 500 feet and endanger human life with 2,000 feet of the source. It is likely, however, that most damage would be confined within the property limits of the facility. Because of the potential hazards of storing, handling, and transporting LNG, strict safety standards are applied to the construction of such facilities and the operation of tankers. These precautions make the

probability of a large LNG accident very low.

Liquified natural gas import facilities must be sited at shorefront locations where population densities are low. A deep water port with channel depths of at least 35 feet is required for operation of LNG tankers. Long distance piping of this gas would be costly due to the low temperatures involved, so storage facilities cannot be located very far inland.

Peak-shaving LNG facilities and liquified petroleum gas (LPG) facilities liquify interstate gas during periods of light demand for use during periods of heavy load demands, and do not necessarily require shorefront locations. Sites for these facilities are likely to be governed by locational considerations of the gas distribution system.

At the present time, there appears to be a possibility that two LNG facilities will be located within the state's coastal areas. Both of the following facilities are proposed to be sited in New York City:

a. Energy Terminal Service Corporation LNG import terminal on Staten Island, with a capacity of 1800 MBbl./day.

b. Texas Eastern Cryogenics Staten Island peak-shaving LNG Plant with a capacity of 600 MBbl./day.

Impacts of Lake Erie Natural Gas Production

Natural gas resources are present under Lake Erie. The amount is not precisely known, but there appears to be commerical as well as public interest in the recovery of this resource. Recently, New York State lifted its prohibition or drilling activities in the Lake. Development and production of this resource seem imminent, but there are concerns that must be addressed before any activity begins.

One issue surrounding the development of natural gas in Lake Erie is the potential damage to the lake's biota and water quality. Drilling operations and the placement of gas pipelines underwater would result in increased, but localized turbidity due to disposal of drilling muds and disturbance of bottom materials. These operations would have temporary adverse effects on benthic organisms. Mobile organisms such as fish would be able to avoid the area and thus any harmful effects. Damaging impacts would result if construction operations stirred up toxic wastes which were previously dumped in the Lake. Overall, it appears that drilling activities may have only minor and temporary effects.

A second issue centers upon the possibility of accidental oil and gas spills. It is generally accepted by geologists that the chances of finding oil under the Lake are very small. If any oil is found, state regulations and law require that the well be permanently capped. As for natural gas, the extremely high pressures associated with well blowouts are not expected to be encountered in Lake Erie. If a leak does occur, the gas would simply bubble to the surface and disperse. A large leakage of gas could ignite and burn until stopped, but such an occurence would cause mimimal environmental damage.

Proposed state regulations would prohibit development within half a mile of the shoreline and half a mile of any public water supply intakes. This distance seems adequate to protect beach areas and water supplies from turbidity problems. If these and other environmental and public safety concerns are satisfactorily addressed, there is a moderate to high probability that natural gas production in Lake Erie will be underway within the next five to fifteen years.

5. ENERGY DEVELOPMENT

Program Policies

5.1 DEVELOP AN INTEGRATED AND COMPREHENSIVE STATEWIDE LONG-RANGE ENERGY MASTER PLAN SO AS TO PROVIDE A FRAMEWORK FOR ENERGY-RELATED DECISIONS IN NEW YORK STATE.

A. State Means for Implementing the Policy

1. Energy Law (Article 5)

This law establishes an energy planning board and requires it to prepare and adopt a state energy master plan. This plan must contain:

a. A forecast of the state's energy requirements for periods of five, ten and fifteen years, together with the bases for such forecasts;

b. A summary of the plans of the state's major energy suppliers for meeting forecasted energy requirements, including descriptions of new energy sources;

c. An identification and analysis of emerging trends related to energy supply, price and demand;

d. A statement of specific energy policies, together with the reasons therefore, and recommendations for administrative and legislative actions that the State Energy Office has determined are desirable to implement the state's energy policy; and,

e. Such additional information as the State Energy Office deems appropriate. The Board must hold public hearings on reasonable notice, in connection with the preparation of the plan.

Prior to the adoption of a State Energy Master Plan, members of the New York Power Pool and New York Gas Group must submit comprehensive long-range plans for future operations (including energy demands for the next five, ten and fifteen year periods) to the State Energy Office and other state agencies. Public hearings will be held prior to the Board's adoption of this Master Plan. Once adopted, specific findings of projected electric and gas "requirements" for the forecast periods will be binding on those agencies having powers to issue certificates under Article VII and VIII of the Public Service Law. The Coastal Management Board will review the master plan and present its comments to the Energy Planning Board if any inconsistencies with the Coastal Management Program are found.

5.2 IN A SINGLE PROCEEDING, PROVIDE FOR THE EXPEDITIOUS SITING OF MAJOR ELECTRIC GENERATING FACILITIES, BALANCING THE PUBLIC NEED FOR ELECTRICITY, THE COMPATIBILITY OF SUCH FACILITIES WITH THE ENVIRONMENT, AND THE NECESSITY OF A SHOREFRONT LOCATION FOR SUCH FACILITIES.

It is recognized that these facilities require, at a minimum, access to coastal waters which are used in cooling processes. The necessity for the entire facility to be located on the shorefront, however,

must be demonstrated on a case-by-case basis, in conjunction with public need and environmental compatibility.

A. State Means for Implementing the Policy

1. Siting of Major Steam Electric Generating Facilities, Public Service Law (Article VIII)

This state law stipulates that the preparation of a site or the construction of a major steam electric generating facility cannot commence without first having obtained a certificate issued by the New York State Board on Electric Generating Siting and the Environment. Prior to granting this certificate, the Board must determine that the facility represents the minimum adverse environmental impacts, considering the state of available technology, the nature and economics of various alternatives, after careful consideration of the nature of the state's interests with respect to aesthetics, preservation of historic sites, forests and parks, fish and wildlife, viable agricultural lands, and public health and safety. The facility must also be in the public interest with consideration given to: the environmental impact of the facility; the total cost to society as a whole; other possible available sites or available alternative sources of energy, both within and out of the state; and, the immediacy and totality of the needs of the people of the state.

The siting procedure established under Article VIII provides for public hearings held prior to the granting of the certificate of environmental compatibility and public need. Also, any public or private party may petition to become an official party to these hearings.

The Article VIII siting procedure establishes a comprehensive process to be followed for locating major steam electric generating facilities. With the vast majority of such facilities presently located in the coastal areas and with the likely prospect of additional steam-electric and other types of electric generating facilities to locate in such areas, it is imperative that the Coastal Management Board, as the 306 Agency, ensure that the appropriate program policies are taken into consideration during this procedure. Therefore, the Board will seek to become a party to all proceedings involving facilities proposed to be located in coastal areas either through statutory designation or on a case by case basis.

As for hydroelectric facilities, the Commission will employ federal consistency provisions as the means of ensuring that such facilities are consistent with the program policies.

2. GAPC Management Program for Existing and Potential Power Plant Sites

The three major management objectives, as discussed in Appendix F are: to ensure that Coastal Management policies are considered in the Article VIII siting procedures for proposed power plants; to ensure that all adverse environmental impacts associated with these facilities are mitigated to the extent possible; and to ensure that compatible development occurs within the area surrounding the facility. The first two objectives are enforced by Article VIII and federal consistency provisions as discussed above; the third by a recommended amendment to Section 239-m of the General Municipal Law. This recommendation calls for including within the Section 239-m review process those lands within 500 feet of the borders of existing or potential power plant sites, or within 500 feet of the floodway of a hydroelectric facility dam.

5.3 PROVIDE FOR THE SITING OF MAJOR GAS AND ELECTRIC TRANSMISSION AND ASSOCIATED FACILITIES AND ENSURE THAT SUCH FACILITIES WILL SERVE THE PUBLIC INTEREST, CONVENIENCE, AND NECESSITY, BE COMPATIBLE WITH THE ENVIRONMENT AND, IF NECESSARY, ARE SITED AT THE MOST APPROPRIATE SHOREFRONT LOCATION.

A. State Means for Implementing the Policy

1. Siting of Major Utilities Transmission Facilities, Public Service Law (Article VII)

This law requires that a certificate of environmental compatibility and public need must be granted by the Public Service Commission prior to the construction of an electric or fuel gas transmission facility, including any associated equipment. Prior to issuing a certification, the Commission must take into consideration: any studies which have been made of the environmental impact of the proposed project; any reasonable alternate locations or routes for the proposed project; including an evaluation of the comparative merits and detriments of each location or route; the reasons for selecting the primary location or route; and public need for the facility. Any public or private party may petition to become a party to the proceedings provided for in this Article, prior to the granting of a certificate.

The Coastal Commission can ensure that the appropriate management policies are adequately taken into consideration during this review process by participating in proceedings that pertain to projects in the coastal area.

Transmission facilities such as interstate gas and petroleum pipelines, interstate and intrastate coal slurry pipelines and electric transmission lines associated with hydroelectric facilities are regulated by federal agencies. Through federal consistency provisions, the Coastal Commission will ensure that such facilities are sited in a manner that is consistent with the Program's policies.

5.4 PROVIDE FOR THE SITING OF PETROLEUM FACILITIES, TAKING UNDER CONSIDERATION: STATE AND NATIONAL ENERGY NEEDS; THE NEED TO MINIMIZE ADVERSE IMPACTS ON WATER AND AIR QUALITY; AND IF SUCH FACILITIES REQUIRE A SHOREFRONT LOCATION, PROVIDE THIS LOCATION WITHIN OR ADJACENT TO EXISTING PORTS.

New petroleum facilities such as oil storage tanks or refineries do not necessarily require a shorefront location for the entire facility. Consideration must be given to a facility's operational requirements for access to coastal waters in the siting of such facilities.

A. State Means for Implementing the Policy

1. Water-Dependent Use Legislation (See Appendix B)

This proposed law requires coastal cities to take into consideration the need for shoreline locations of various water dependent uses. Petroleum processing, transfer or storage of oil and other petroleum products, such as gasoline, heating oil and kerosene, may be considered as appropriate water dependent uses in some portions of the state's coastal areas, and thus be accorded locational priority.

2. State Pollutant Discharge Elimination System, ECL (Article 17)

Any existing or proposed petroleum-related facility may discharge oil or other petroleum products into coastal waters, and thus affect the quality of the waters. This system, through its permit procedure, regulates such discharges to ensure that established water quality standards are met.

3. Clean Air Act, ECL (Article 19, Title 3)

The State Implementation Plan established under this law requires permits for all air emission sources, including petroleum facilities.

4. Oil Spill Prevention, Control and Compensation, Navigation Law(170 et. seq.)

Prior to granting a license to a developer for a major oil facility, oil spill contingency plans must be developed that will provide evidence that any spills or contamination can and will be cleaned up.

5. State Environmental Quality Review Act, ECL (Section 8-0113)

An Environmental Impact Statement may be required for most petroleum facilities under present regulations. This will enable cities as well as other municipalities to consider the findings contained in such statements prior to the issuance of any permit for such facilities.

Presently, the State Environmental Quality Review Act regulations require that only alternative actions be considered. In many instances this requirement is met by the alternative of no action. Therefore, the Coastal Management Program recommends that the State Environmental Quality Review Act regulations be amended to

require that at least one alternative site for a petroleum facility be evaluated, in addition to or in place of the required discussion on alternative actions.

5.5 PROVIDE FOR THE SITING OF LIQUIFIED AND SUBSTITUTE NATURAL GAS FACILITIES THROUGH A REVIEW PROCESS WHICH BALANCES STATE AND NATIONAL ENERGY NEEDS, PUBLIC SAFETY CONCERN, AND THE NECESSITY FOR A SHOREFRONT LOCATION.

A. State Means for Implementing the Policy

1. Environmental Conservation Law (Article 23, Title 17

This law requires that all liquified natural gas (LNG) and liquified petroleum gas (LPG) facilities, not in use by September 1, 1976 must obtain a certificate of environmental safety before construction. Such facilities must conform to safety siting criteria established by the Department of Environmental Conservation, be shown to be necessary, and be otherwise in the public interest before a certificate is granted. During the review of such projects, consideration is given to: the location of the proposed facility; the design and capacity of the facility; expected sources of the gas, its transportation to and from the facility and its transportation routes; the need for the facility; its environmental impacts; descriptions of reasonable alternative locations of the facility; and other information deemed essential to determine whether the proposed facility is necessary and compatible with the surrounding environment and with the safety of neighborhood populations.

2. Water-Dependent Use Legislation (See Appendix B)

This proposed law requires coastal cities to take into consideration the need for such facilities, as well as other water-dependent uses, to locate on or near the shoreline.

3. State Environmental Quality Review Act, ECL (Section 8-0113)

An Environmental Impact Statement may be required for most liquified and substitute natural gas facilities under present regulations. This will enable cities, as well as other local governments, to consider the findings contained in such statements prior to issuing any permit for such facilities. To improve this review and evaluation process, these State Environmental Quality Review Act regulations should be amended to require that at least one alternative site for a proposed natural gas facility be evaluated in these statements.

5.6 ENCOURAGE THE DEVELOPMENT OF LAKE ERIE NATURAL GAS IN ORDER TO FURTHER THE NATIONAL EFFORT OF ENERGY SELF-SUFFICIENCY, AND ENSURE THAT ITS DEVELOPMENT AND OPERATION TAKE PLACE IN AN ENVIRONMENTALLY COMPATIBLE MANNER.

A. State Means for Implementinting the Policy

1. Environmental Conservation Law, (Section 23-1101)

In accordance with this law, the Department of Environmental Conservation may lease the lands beneath Lake Erie, and thus the state's environmental agency will retain control over the process and ensure appropriate environmental safeguards.

2. Environmental Conservation Law, (Section 23-0305)

In accordance with this law, the Department of Environmental Conservation, in cooperation with the Public Service Commission, will retain jurisdiction over any wells and wellheads, collection of production data and limitation of production from any well and will ensure the effective development of the delivery system and production allocations.

3. Siting of Major Utilities Transmission Facilities, Public Service Law, (Article VII)

This law establishes procedures to be followed by developers of natural gas in the construction of any gathering pipelines from wellheads, and master collecting pipelines in accordance with the environmental considerations of this Article as previously discussed under the policy for transmission facilities.

4. Public Service Law, (Section 66)

Under this law, the Public Service Commission regulates the safe construction and operation of natural gas pipelines from the wellhead to any onshore connection.

In a Memorandum of Understanding between DEC and PSC, procedures affecting construction and operation have been established, including the above, for the regulation of natural gas recovery and transportation from beneath Lake Erie. This Memorandum further states that "any system for the development of natural gas resources shall be based on efficiency, economy, conservation and environmental compatibility, including plans and policies developed under the Federal Coastal Zone Management Act of 1972, as amended, 16 U.S.C. 1451 et seq."

Federal Program Requirement

Section 305(b)(8) of the Coastal Zone Management Act of 1972, as amended, requires that a state Coastal Management Program include "a planning process for energy facilities likely to be located in, or which may significantly affect, the coastal zone, including but not limited to, a process for anticipating and managing the impacts from such facilities." The issue analysis, proposed policies and existing state legislation presented above satisfy this requirement.

6.
Fish and Wildlife

6. FISH AND WILDLIFE

Issue Analysis

The abundant fish and wildlife found in New York's coastal areas, particularly its estuaries, have long been recognized as important food resources and for their recreational value. As an indicator of their direct value to the State, the economic benefits derived in 1976 from commercial and sport utilization of New York's marine fisheries were estimated to be $87.8 million and $222.5 million.

The State's fish and wildlife resources also provide a less direct but equally important social benefit in that they function as indicators of the stability and productivity of an ecosystem and, therefore, of the quality of man's environment. The decline of certain species (often the rarer species) is frequently an early symptom of environmental stress and degradation.

Finally the state's living coastal resources are important in terms of their own intrinsic ecological value. Diversity of flora and fauna provides stability to an ecosytem. In addition, these living resources contribute to the productivity of coastal environments through their conversion of energy and recycling of materials.

Hence, the basic goal of New York's fish and wildlife management programs has been to protect, manage, and develop these resources so that they sustain their capacity to provide economic, social, and ecological benefits.

Concerns relative to coastal fish and wildlife resources in New York center around the following topics: protection and restoration of their habitats; prevention of their contamination by toxic substances and other pollutants; utilization of both recreation and commercial purposes; and management of the resources for their ecological value as well as for their direct benefits to man.

Habitat Degradation

Suitable habitats are essential for survival of fish and wildlife in that they provide all the biotic and abiotic requirements of organisms at every stage in their life cycle. Consequently, fish and wildlife species cannot be protected and maintained without preserving their habitats.

Certain habitats, such as breeding and nursery areas, migratory routes, or other specific sites where fish and wildlife populations tend to congregate, must be identified and afforded special protection. The loss of these significant habitats creates a greater threat to the survival of a population than would the loss of areas where the organisms are less densely distributed.

In New York, habitats which have suffered the greatest losses are freshwater and tidal wetlands. Until 1973, draining and filling of wetlands for development purposes was largely unregulated. Wetlands also provided convenient, inexpensive sites for disposal of dredge spoils. The impact of such practices resulted in the loss of vegetative cover, breeding, nesting and feeding grounds for reptiles, amphibians, mammals, shorebirds and waterfowl, and the loss of spawning and nursery

areas for fish, shellfish and crustaceans. Many of the wetland areas around the highly developed waterfront sections in Buffalo, Rochester and New York City have been drained and filled.

Vegetation removal resulting from residential and commercial development, stream channelization for flood control, and certain farming practices have increased the variability in drainage rates and water temperatures as well as adding to stream bank erosion and sedimentation in coastal tributaries. Important littoral areas used for fish spawning habitat have been blanketed with silt. Development activities along tributary streams (e.g. those rivers and streams which are tributary to Lake Erie or Lake Ontario and support runs of salmon, steelhead-and brown trout) must be regulated to minmize vegetation removal and stream bank alternation.

Toxic Substances and Other Pollutants

In New York, a critical problem is the contamination of fish, wildlife and their habitats with toxic substances, in particular Polychlorinated Biphenyls (PCBs), Mirex and heavy metals (mercury and cadmium). These compounds enter the environment from industrial and municipal discharges, atmospheric fallout and leachate from landfills. For example, Mirex had been discharged into the Niagara River where it collected and became stored in the bottom sediments. Once ingested by small invertebrates, this toxic entered the aquatic food chain and became increasingly concentrated at successive trophic levels. Eventually, hazardous levels of Mirex were detected in certain predator fish species such as coho and chinook salmon, lake trout, and smallmouth bass.

In 1976, New York State restricted the possession of these and other fish species caught in Lake Ontario and its tributary streams. Although these restrictions were lifted in March, 1978, the contamination of Lake Ontario fish by Mirex and other toxic compounds persists.

An equally serious problem has occured in the Hudson River where 440,000 pounds of PCBs were discharged into the River and contaminated the bottom sediments and resident fish species. Cleanup costs for dredging the "hot spots" in the river were estimated to be approximately $25 million.

Pollution problems created by combined sewer overflows, failing septic systems, urban stormwater runoff, oil spills, discharge of vessel wastes and solid wastes (discussed in the section on WATER QUALITY) also creates adverse impacts on fish, shellfish, wildlife and their habitats.

Finally, the clustering of electric generating facilities which employ open-cycle cooling systems along confined water bodies such as the lower reaches of the Hudson River may have serious biological effects on certain aquatic species. Many areas in the Hudson River estuary are concentration areas for estuarine-dependent fish species such as the striped bass. The impingement of juvenile fish on the water intake screens and the entrainment of fish eggs and larvae within the cooling system may have significant adverse effects on the river's populations. Sudden changes in water temperatures caused by erratic thermal discharges of such cooling systems also harm aquatic life.

Utilization of Fish and Wildlife Resources

Posted lands, strip cottage development, highway construction, competition for dock space boat ramps and other land use constraints tend to severely limit recreation and commercial utilization of the state's fish and wildlife resources. Mirex in Lake Ontario, PCB's in the Hudson and the contamination of shellfish beds on Long Island also preclude harvesting those resources as their optimum sustained yield levels. In addition, the tremendous growth potential for the commercial fishing industry in New York City and Long Island created by the 200-mile extension of the federal jurisdiction limits can only be realized by improving and expanding fish harvesting and processing facilities. Inadequate channel access and limited availability of pier and docking facilities serves to impede growth of the deep-water segment of the fishing industry. Insufficient number of boat ramps, inadequacy of catch transfer sites, and the lack of sites for shellfish processing and gear storage tend to limit development of the nearshore segment of the commercial fishing industry.

Program Policies

6.1 SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS WILL BE PRESERVED, MANAGED AND, WHERE POSSIBLE, RESTORED SO AS TO MAINTAIN OR RE-ESTABLISH THEIR VIABILITY AS HABITATS.

Important coastal habitats include such areas as wetlands, islands, shoals, littoral areas and tributaries. When setting priorities among competing land and water uses, certain habitats require a greater degree of protection than others. For purposes of the Coastal Management Program such habitats are identified as "significant habitats." Significant habitats are: 1) those habitats identified as being essential for the survivial of a large proportion of a particular fish or wildlife population; 2) those which support populations of rare and endangered species; 3) those which occur at a very low frequency within a geographic area; 4) those which support fish or wildlife populations having significant commercial or recreational value; or 5) those which would be difficult or impossible to replace. Significant habitats will be protected against land use or development will interfere with their natural functioning as habitats. Identification on New York's significant habitats will be based on the inventory and mapping of coastal fish and wildlife habitats conducted by the Department of Environmental Conservation.

Although there is no signle, comprehensive state law or program which provides for the protection of all significant coastal habitats, there are several laws and programs whose cumulative authority provides a basis for implementing this policy.

A. State Means for Implementing the Policy

1. Tidal Wetlands Act, ECL (Article 24)

At present, the State Tidal Wetlands Program is one of the most significant resource management tools available to protect New York's marine habitats. Of the 3,108 total miles of New York coastal shorelines, about 1,600 miles are subject to regulation under the Program. Tidal wetlands often provide wildlife habitats which include breeding, nesting, feeding grounds, and vegetative cover for many types of wildlife, waterfowl and shorebirds. Because approximately two-thirds of New York's marine sport and commercial finfish and shellfish species utilize tidal wetlands at some stage of their life cycle, this permit program protecting wetlands enables the State to regulate any land use activities that would diminish the value of wetlands as fish and wildlife habitats. Regulated activities include any form of draining, dredging, excavation, dumping, filling, construction, pollutant discharge or any other activity which directly or indirectly impairs the tidal wetland's ability to provide habitat.

2. Freshwater Wetland Act, ECL (Article 24)

Freshwater wetlands also function as important fish and wildlife habitat. The program established under this Act regulates activities such as draining, dredging, and filling, thus protecting many significant habitats. It is administered by local governments pursuant to state guidelines and after official filing of wetland maps by the State. Counties or, utimately, the State may administer the program in municipalities where local governments fail to exercise this responsibility. Until the maps are filed with the communities, the Department of Environmental Conservation regulates freshwater wetlands through its interim permit program. Before granting or denying a permit, the municipality must determine if the activity will have an adverse impact on the habitat value of the wetland.

3. Stream Protection Act, ECL (Article 15, Title 5)

One of the objectives of this law is to minimize disturbances to the beds and banks of certain streams (Class C(t) and above) which cause increased turbidity, and irregular variations in velocity, temperature and water levels, in order to protect fish and wildlife and their habitats. This permit program, administered by the Department of Environmental Conservation, also regulates dredging and filling in navigable waters and construction of certain dams and docks. Further, it requires the removal, replacement, or repair of illegal or unsafe structures, fills or excavations. This could accomplish restoration of physically altered habitats.

4. Wild, Scenic and Recreational Rivers System, ECL (Article 15, Title 27)

   Along stretches of rivers designated as "wild", "scenic", or "recreational", the State Department of Environmental Conservation is authorized by this law to exercise land use controls in order to protect the outstanding natural, scenic, historic, ecological and recreational resources of these rivers. This may include the protection of fish and wildlife resources and their habitats in the preparation and implementation of adopted management programs.

   Presently, portions of the Connetquot and Carmens Rivers in Suffolk County have been designated as scenic and recreational rivers. Studies are underway in other coastal areas of the State to determine which additional rivers should be included in this system.

5. State Game Refuges, ECL (Article 11-2105)

   This section of the law enables the Department of Environmental Conservation to set aside enclosed land or water owned by the State as a refuge for the protection of fish, wildlife, trees and plants. Implicit to this function is the preservation of important habitats.

6. Fish and Wildlife Management Practices Cooperative Program, ECL (Article 11-0501)

   This law enables the Department of Environmental Conservation to enter into cooperative agreements with private property owners to manage fish and wildlife resources and their habitats on privately owned lands.

7. New York State Park Preserve System, PRL (Article 20)

   This legislation gives the Office of Parks and Recreation the power (in conjunction with Section 3.09 of PRL, authorizing acquisition of land for state recreational facilities) to purchase park preserve areas in or near metropolitan regions in order to "maintain the integrity of fauna..." and to "provide for the management of all unique, rare, or endangered species of fauna within park preserve areas." By purchasing fish and wildlife habitat areas for passive recreational uses, their preservation and management is assured. Assistance in identifying such areas can be provided to the Office of Parks and Recreation through the Coastal Management Program.

8. State Nature and Historical Preserve Trust, ECL (Article 45)

   This section of ECL authorizes the Department of Environmental Conservation, after recommendation by the State Nature and Historical Preserve Trust Boad of Trustees and authorization by the State Legislature, to purchase property for inclusion. Lands that can be a part of the preserve include those of ecological significance, including coastal fish and wildlife habitats.

9. Implementation of Environmental Quality Bond Act of 1972 ECL (Article 51)

Title 7 of Article 51 directs the Department of Environmental Conservation to appropriate monies from the Environmental Quality Bond Act for land preservation and improvement projects. These projects include acquisition of important tidal and freshwater wetlands. Section 3-0305 of the ECL gives the Department of Environmental Conservation the power to acquire property for any of the functions of the Department.

B. Local Means for Implementing the Policy

Local government may employ any of the following techniques to implement the policy on fish and wildlife habitat protection.

1. Regulation

A locality can adopt and enforce freshwater wetlands regulations in accordance with state guidelines. Municipalities may enact zoning provisions aimed at protecting identified habitat areas, such as open space requirements, prohibition of the removal of soil and vegetative cover essential to habitats, and regulations on the use and siting of buildings of activities which may have an adverse effect on nearby habitats or fish and wildlife resources.

Municipalities may adopt programs, where feasible, that permit an owner of land including or adjoining a habitat to transfer the development rights of the parcel to another parcel in the locality.

As part of local subdivision regulations, a developer may be required to employ the cluster design technique if his land includes or is adjacent to a significant fish or wildlife habitat. This approach would permit the developer to locate future residential construction away from an identified habitat, thereby reducing adverse effects.

2. Acquisition

Localities can acquire fee or less than fee interests in land for the protection of critical fish and wildlife habitats. Such acquisition would be in accordance with local plans and adopted capital programs.

6.2 FISH, WILDLIFE AND THEIR HABITATS SHALL BE PROTECTED FROM CONTAMINATION DUE TO THE INTRODUCTION OF TOXIC SUBSTANCES AND OTHER POLLUTANTS.

This policy is consistent with Environmental Conservation Law (Article 17) which states that it is "public policy of the State of New York to maintain reasonable standards of purity of the waters of the State consistent with...the propagation and protection of fish and wildlife, including birds, mammals and other terrestrial and aquatic life..."

A. State Means for Implementing the Policy

1. State Pollutant Discharge Elimination System, ECL (Article 17, Title 8)

This law authorizes the Department of Environmental Conservation to operate a permit system to regulate all industrial, commercial and municipal discharges, as well as those from residential subdivisions of five or more lots, into the state's surface and groundwaters. Through this program, the State can control the discharge of toxics and other pollutants from point sources which contaminate fish and wildlife resources.

2. State Certification Federal Water Pollution Control Act (Section 401)

This section of the Federal Water Pollution Control Act Amendments of 1972 provides the State without authority to review applications for licenses or permits submitted to any federal agencies to conduct activities within the State and to certify whether discharges into the state's navigable waters are in compliance with water quality requirements stipulated under various sections of the Federal Water Pollution Control Act and its amendments. Federal permits covered by this section are primarily those issued by the Army Corps of Engineers for dredging and spoil disposal, by the Environmental Protection Agency for certain waste water discharges, and by the Nuclear Regulatory Commission and Federal Energy Regulatory Commission for nuclear and hydroelectric energy generating facilities. The discharge of pollutants resulting from such federal projects, which may affect the state's coastal fish and wildlife resources, can be regulated accordingly.

3. Toxic Substance Monitoring Program, ECL (Artcle 17)

This program is designed to monitor the occurrence and significance of 17 different toxicants in fish from 102 sampling locations statewide over a three-year period. This effort will enable the state to trace the distribution of toxic substances once they are discharged into the environment, identify those biological resources being affected, and direct clean-up operations accordingly.

4. Substances Hazardous to the Environment, ECL (Article 37)

Substances which are hazardous and tend to accumulate in the food chain threaten fish and wildlife and other living coastal resources. The State recently passed this law in an effort to control the discharge of hazardous substances into the environment. Rules and regulations pertaining to the storage and discharge of these substances are under preparation. The hazardous substances identified will be included within these rules and regulations.

5. Solid Waste Management, ECL (Article 27, Title 7)

Garbage, refuse, industrial and commercial wastes, incinerator residue, sludge and other solid wastes can cause physiological disorders in fish and wildlife and contaminate their habitats if not treated and disposed of properly. The construction and operation of solid waste management facilities are regulated as authorized by this law, and such regulations are directed at the prevention or reduction of pollution of resources.

6. Stream Pollution Prohibited, ECL (Article 11-0503)

Deleterious or poisonous substances (e.g., dyestuffs, coal tar, and refuse from a gas house) may not be discharged into any waters, either private or public, in quantities injurious to fish life, protected wildlife or waterfowl inhabiting those waters or injurious to the propagation of fish, protected wildlife or waterfowl. Also vessel wastes (oil, sludge cinders or ashes) may not be discharged into the Hudson River.

7. Control of Pollution Injurious to Fish/Shellfish, ECL (Article 13-0345 and 17-0503)

These sections of the law provide for the protection of shellfish and finfish from contaminants (e.g., sludge, acid, refuse, and sewage) which affect the flavor, odor, color, or sanitary condition of these fishery resources.

8. Oil Spill Prevention, Control and Compensation, Navigation Law, (Article 12)

Unregulated discharge of petroleum or oil spills associated with the transport and storage of such products can damage the state's coastal fish, shellfish, wildlife and other biotic resources. This law authorizes the Department of Transportation and the Department of Environmental Conservation to control the methods of petroleum storage and transfer and to require prompt cleanup and compensation to damaged parties when spills or discharges occur.

9. Siting of Major Steam-Electric Generating Facilities (Public Service Law, Article VIII)

Prior to construction of a major steam-electric generating facility, an applicant must obtain a certificate of public need and environmental compatibility from the State Siting Board. The applicant is required to collect detailed environmental data and be able to demonstrate that minimum adverse environmental impacts (including impacts on fish and wildlife resources) would result from construction and operation of the proposed facility at the selected site. The Coastal Management Program is relying on Article VIII to address its coastal management policies in connection with siting of major steam-electric generating facilities.

10. State 208 Water Quality Management Program

Through this program the State is addressing the control of non-point sources of contaminants e.g. runoff from urban and rural areas. Further description of this program is provided in the WATER QUALITY section.

B. Local Means for Implementing the Policy

1. Regulation

Municipalities are authorized, by Article 3 of the Public Health Law and Article 27 of the Executive Law, to adopt a Local Sanitary Code. These sanitary codes are designed to insure that individual sewage disposal systems do not create health hazards, do not adversely affect the environment, or do not impair the use of property. Obviously, fish and wildlife habitats can be protected from pollutants through the local adoption of such a sanitary code.

6.3 IN A MANNER CONSISTENT WITH SOUND RESOURCE MANAGEMENT CONSIDERATIONS, PUBLIC USE OF FISH AND WILDLIFE RESOURCES FOR RECREATIONAL PURPOSES SHALL BE EXPANDED BY INCREASING ACCESS TO EXISTING RESOURCES, SUPPLEMENTING EXISTING STOCKS AND DEVELOPING NEW RESOURCES.

Sound resource management considerations include: biology of the species; managing stocks to attain optimum sustained yield; availability of suitable habitats; public demand; costs; available technology; and political constraints.

A. State Means for Implementing the Policy

1. Stream Rights Acquisition, ECL (Article 51-0701)

This law enables the Department of Environmental Conservation to acquire access rights (fee-simple or less-than-fee simple) on quality streams guaranteeing fishermen access to various stretches of streams and rivers. Additional information needed for determining priorities in this acquisition program will be provided to the Department of Environmental Conservation through the Coastal Management Program.

2. Other State Acquisition Powers, PRL (Section 3.09)

This law authorizes the Office of Parks and Recreation to acquire, establish, and operate facilities for recreational purposes, including valuable fishing and hunting areas. For further information on the Office of Parks and Recreation's powers, see the RECREATION policies contained in this report.

3. Urban Fisheries Program, ECL (Article 11)

The Department of Environmental Conservation has elected to increase fishing activity in several metropolitan areas of the State, including Buffalo, Albany, Troy, and New York City, through its Urban Fisheries Program. Public education, eliminating problems of access to existing, underutilized fisheries, and creation of new fisheries through stocking of ponds or establishing suitable habitat are specific means by which the objectives of this program will be accomplished. In most cases, these fishing areas are accessible by public transportation.

4. General Powers and Duties of the Department, ECL (Article 11, Title 3)

The Department of Environmental Conservation is authorized to manage fish and wildlife resources of the State for recreational purposes among others; it can propagate fish and wildlife to supplement existing stocks and extended seasons where such action is biologically sound, thereby increasing hunting and fishing opportunities.

B. Local Means for Implementing the Policy

1. Acquisition

Municipalities have the power to acquire fee or less than fee interests in land. This power could be used to acquire lands which would provide access to public lands for increased fishing and hunting opportunities.

6.4 IN A MANNER CONSISTENT WITH SOUND RESOURCE MANAGEMENT CONSIDERATIONS,* ENCOURAGE INCREASED UTILIZATION OF COMMERCIAL FINFISH AND SHELLFISH RESOURCES BY EXPEDITING THE CONSTRUCTION OF NEW OR THE IMPROVEMENT OF EXISTING COMMERCIAL FISHING SUPPORT FACILITIES, INCREASING ACCESS TO FISHING AREAS, MAINTAINING ADEQUATE STOCKS AND EXPANDING AQUACULTURE ACTIVITIES.

A. State Means for Implementing the Policy

1. Water-Dependent Uses Legislation

This proposed legislation will ensure that coastal cities identify and reserve waterfront locations to accommodate those uses which have been identified as "water-dependent", e.g., construction of marinas, catch transfer facilities or fish processsing plants. Such action will reduce the time and expense needed for site selection efforts by a commercial fishing enterprise and guide new development to areas where such activities are most appropriate. The city government will have a major role in selecting and regulating such areas. The legislation provides that this

* See Policy 6.3 for an explanation of "sound management considerations."

responsibility would pass to the county or, to the State should a municipality fail to exercise it.

2. Funding Incentives, Coastal Management Act (Section 848-g)

Preference in the provision of grants, low-interest loans and other financial assistance through state agencies, (such as New York Job Development Authority and the New York Urban Development Corporation) for projects sited within the State coastal boundary will be given to commercial fishery development activities. Similarly, the Coastal Management Board will employ the federal consistency provision of the Coastal Zone Management Act to encourage federal agencies (such as the United States Department of Housing and Urban Development, Economic Development Administration, and the National Marine Fishery Service) to provide financial assistance for developing the state's commercial fishing industry.

3. Streamlined Permitting Procedures, Executive Law (Article 39 and ECL (Article 70-0107)

Complex and sometime conflicting permitting procedures have created a disincentive for private investment in the construction of fishing support facilities. These streamlined procedures have created a one-stop service for permit applicants, thereby removing an important constraint in the expansion of the State's commercial fishing industry.

4. Research and Technical Assistance, Coastal Zone Management Act Section 310)

This program enables the State to sponsor a study to assess the feasibility of expanding aquaculture activities on Long Island and to recommend suitable locations for these facilities. Similar studies leading the expansion of aquaculture and commercial fishing activities could be conducted in the Hudson River and Great Lakes areas once the problems with toxics contamination have been alleviated.

5. Marine and Coastal Resources, ECL (Article 13, Title 1 and 3)

The Department of Environmental Conservation may lease state-owned lands underwater for the cultivation of shellfish. Efforts to amend this law to include finfish and marine plants may be forthcoming as a follow-up to the Long Island Aquaculture (Mariculture) study cited above. The Department also regulates the commercial harvest of fish within state waters which extend three miles out from shore.

B. Local Means for Implementing the Policy

1. Regulation

Municipal zoning regulations can be used to provide increased utilization of commercial fin and shellfish. Marine commercial zones can be established in areas where such facilities as marinas, commercial docks, and fish processing plants would be appropriate. Such zoning would reduce competition for dock space between sport and commercial fishermen, and hence reduce the access problem for commercial fishing activities. Provision may also be made for the storage of fishing gear in residential areas.

2. Capital Projects

Municipalities have capital construction powers which might be used to provide infrastructural improvements necessary for commercial fishing. Roads, piers, docks, lighting, and sanitary sewers are all facilities that can be improved or constructed to aid the commercial fishing industry.

7.
Flooding and Erosion

7. FLOODING AND EROSION

Issue Analysis

Flooding and erosion problems in the state's coastal areas can be divided into two types by location: along the shorelands of the marine and Great Lakes coast and, along the major rivers and tributary streams. The first category is the more crucial one in New York State's coastal areas.

Coastal flooding and erosion in the State's marine and Great Lakes coasts are generated by powerful natural processes involving water and wind and shoreland forms. In striving to maximize their benefits from resources in the coastal area, people have often ignored or been unaware of those processes and have built structures on such hazardous areas as beaches, dunes, floodplains, barrier islands and erodible bluffs, where they are subject to damage or loss or cause harm to natural protective landforms. In other cases, people have attempted to defend their property against flooding and erosion by installing protective structures, many of which have been inadequately designed and constructed, and have caused damage to adjacent property. As a result, great economic loss and public expense have been incurred, and human lives endangered.

Along the State's marine and Great Lakes shoreline, the coastal processes and landforms are similar, generally differing only in degree of occurrence.

Beaches are among the most variable landforms, because they are subject to the impact of both wave and current energy. In their natural state, with their movements unaffected by man, beaches may be reduced in extent (erosion), rebuilt (accretion) or remain stable over time, depending on the varying power of the erosion agents acting upon them and the availability and rate of deposition of new beach materials. Wave energy can remove or add those materials. Longshore transport, which on extensive stretches of the state's coast travels generally in one direction (for example, west to east on Lake Ontario, and east to west along Long Island's south shore), will carry beach materials along its path, periodically depleting beaches at one point and augmenting them at others. In some cases, as on Lake Ontario, the sand particles are eventually lost in deep troughs offshore and thus permanently removed from the process.[1] The most extensive beaches in the state's coastal area are found on the barrier islands and "mainland" of Long Island, particularly along its south shore. Although the width of beaches on Lake Ontario and Lake Erie varies with the short and long term levels of lakes, for the most part the relative scarcity of sand in the coastal lands and, in the case of Lake Ontario, the sharp drop in the beach terrain offshore, have not permitted accumulation of beach materials to the same extent as on Long Island. Beaches are valuable as a first defense against storm waves.

Dunes are formed over long periods of time from sand blown by onshore winds and from adjacent beaches and, except for a small area in Oswego County on Lake Ontario, are found only on Long Island. They are constantly if imperceptibly changing form, stabilizing only as vegetation establishes itself. Dunes are fragile and very susceptible to damage by man's activities; for example, off-road vehicular use. They have a high value as a second tier of defense against the powerful actions of storm-driven waters and as part of the shore system.

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1 St. Lawrence Eastern Ontario Commission, A Report on Coastal Resources, p. 68.

Barrier islands are a unique shore form, the most significant being found on Long Island, at Fire Island and Jones Beach (smaller scale barrier islands and spits are also located at the mouths of several bays of Lake Ontario). Those long, narrow accumulations of sand comprise a beach fronting the ocean, a dune system, and tidal wetlands areas or bay beaches on their landward side. The islands are separated by tidal inlets which flush the inner bays. The combination of shoreforms and the natural coastal processes create the most fragile and unstable of coastal lands and thus make them extremely hazardous for development. When unaltered by man, barrier islands respond to natural forces in two ways: first, by absorbing wave energy which, in major storms, is dissipated on the beach and over the dunes, with beach materials often being carried into the bay beaches or wetlands. Barrier islands earn their name in this way by protecting the waters of the inland bays and substantial development on the "mainland" shore. Secondly, the longshore transport of beach materials, if uninterrupted, physically lengthens the islands. The most dramatic illustration of this process is on Fire Island where the western end of the island is estimated to have been extended by over four miles since 1825.[2]

Second to the coastal beaches, bluffs are the most prevalent erodible landform on Long Island and along the shores of Lake Erie and Lake Ontario. Erodible bluffs can be weakened by groundwater seepage and surface runoff, but the greatest damage is caused by waves. The degree to which waves contribute to bluff erosion depends principally on the strength of the waves and the energy absorbing capacity of the beach fronting the bluffs. Storm waves, combined with high tides or lake levels which reduce the width and thus the protection provided by the beaches, will produce a high rate of bluff recession. The following estimates of annual bluff recession rates on the State's coasts reflect both differences in the geologic composition of the bluffs, as well as the relative strength of erosion agents at the bluff location: at Old Field Point on Long Island, 5.2 feet per year;[3] on the Lake Erie shoreline of Chautauqua and Erie counties, from 0.5 to 1.1 feet per year;[4] and in the stretches of bluff in Oswego County on Lake Ontario, up to 2.35 feet annually.[5] Average annual recession rates, of course, do not necessarily mean that the bluffs erode steadily at a fixed rate. In some cases, individual storms may remove land at many times the average rate.

Damages Resulting from Flooding and Erosion

On these beaches, barrier islands, bluffs, and other hazard areas such as low-lying floodplain lands, man has built houses, marinas and other facilities. Measures of the hazard risks and of the large scale of investments made in those areas are suggested by the following examples. In March 1973, storm waves resulting from the action of strong northerly winds on a high lake level caused damage estimated at $25 million to both public and private property along the

2 Wolff, Manfred P. 1975. "Barrier Island Accretion Features, Democrat Point, Fire Island," pp. 73-88 in Guidebook to Field Excursions, 47th Meeting of the N.Y.S. Geological Association, Manfred P. Wolff, ed. N.Y.S. Geological Association, Syracuse. 327 p., cited in Nassau-Suffolk Regional Planning Board, A Coastal Erosion Subplan for Nassau and Suffolk Counties, 1978

3 Nassau-Suffolk Regional Planning Board, op. cit.,

4 Erwin, et al, Technical Report on Determination of Quantity and Quality of Great Lakes U.S. Shoreline Eroded Material, International Reference Group on Great Lakes Pollution from Land Use Activities, International Joint Commission 1976.

5 St. Lawrence-Eastern Ontario Commission, Report on Coastal Resources, p.68

New York shore of Lake Ontario.[6] As an indicator of extreme conditions, over $750 million in damages could be inflicted on the south shore of Long Island between Fire Island Inlet and Montauk Point if the coast were assailed by the most severe hurricane likely in that locale combined with record high tides (a standard project hurricane).[7] The effects of erosion and flooding, however, are not linked solely to major weather disturbances. For instance, total annual damages along the 120 mile length of Long Island's south shore have been calculated at $9 million.[8] In developing those hazard areas, private as well as public investments are threatened. The maintenance or replacement of local, county or state facilities necessitated by erosion and flooding is borne by public funds. In summary, the drive to locate as close as possible to the shoreline has resulted in the commitment of massive private and public expenditures in development located where it is subject to damage or loss.

An additional consequence of development on hazardous shorelands is that it may destroy naturally protective landforms such as beaches and dunes which could absorb the energy of stormwaters. Thus, inland development which otherwise would be considered outside the principal hazard zone may become vulnerable.

Damage from riverine flooding and erosion, while not of major proportions compared with that incurred on the marine and Great Lakes frontal shorelands, can be significant. Most of the damage occurs on the banks of tributary streams at points near the coast where ice jams or sediments carried down by the streams or by longshore transport block the flow. The issue here is how to reduce the damage to property from riverine flooding and erosion.

A special type of erosion issue is how to cope with the floating debris found in both the Hudson River and New York Harbor and in other commercial boat harbors. The debris comes from sources such as decaying piers and bulkheads, abandoned barges, and ships and vegetation. It is estimated that approximately 14,130 cubic feet of debris enter the Hudson River annually.[9] The debris poses a threat to commercial shipping and recreational craft.

Problems of Remedial Responses to Flooding and Erosion

Three basic types of remedial responses to the threat and effects of flooding and erosion on the Great Lakes and marine coast have evolved: structural, nonstructural and combinations thereof. The discussion of responses which follows generally omits reference to larger scale projects undertaken by the public sector; these will be described later. However, many of the problems cited in this section apply also to public sector actions.

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6 St. Lawrence-Eastern Ontario Commission, Lake Ontario and the St. Lawrence River: Analysis and Recommendations Concerning High Water Levels, 1975, p. 88

7 U.S. Army Engineering District, New York. Final Environmental Impact Statement for Fire Island Inlet to Montauk Point, New York Beach Erosion Control and Hurricane Protection Project, 1977, cited in Nassau-Suffolk Regional Planning Board.

8 U.S. Army Engineer Division, North Atlantic District Corps of Engineers, Report on Shoreline Study, New York, 1971, cited in Nassau-Suffolk Regional Planning Board, op. cit., p. 51.

9 New York State Coastal Management Program, Draft Regional Element, Hudson River Valley, 1978, p. III-10.

The first kind of structural response is the installation of frontal protective devices. There are several difficulties associated with the devices which are widely used. Because of the great force generated by coastal processes, the structures must be soundly designed and constructed in order to be effective. However, along the eastern end of Lake Ontario and the shores of the St. Lawrence River, it has been estimated that less than half of the 470 protective structures examined in a survey were of more than limited effectiveness.[10]

In addition, improperly designed frontal structures such as bulkheads and seawalls may accelerate the loss of sand, because storm wave energy is focused on the beach rather than absorbed by the dunes. Thus, a natural shield may be lost. Difficulty also arises from attempts to protect a house, for example, located on a narrow stretch of shoreland. Because the erosion will continue on the unprotected sides of the structure and because of its vulnerability to lateral wave attack, the useful life of an otherwise sound structure will be shortened considerably and erosion conditions on adjacent lands exacerbated. Protective structures are not only used as direct defenses against damage to buildings but to prevent the loss of beaches. The process of littoral transport will trap sand on the desired side of a groin or jetty, but the beaches downcurrent will be depleted by the continuing longshore current or by wave erosion, thus eventually threatening buildings at that location.

Another type of difficulty with structural responses to erosion and flooding is the littering of beaches with debris from buildings, septic tanks and protective structures damaged or destroyed in storms. The debris not only may spoil the beauty of a beach but cause injury to bathers, impair water quality and block access to the resource.

The final difficulty in using structural measures against erosion is the high cost for these devices which will resolve most of the design and construction problems mentioned above. One indicator is provided by an ongoing United States Corps of Engineers project to test new and efficient low-cost structures; the maximum price being used is $125 per front foot. However, the structures being tested are suitable only for low wave energy areas where the wave height is less than six feet. This would eliminate applicability to oceanfront shores of Long Island.[11] A second cost-related problem arises from the inherent weakness of isolated frontal structures. On a stretch of coast possessing generally similar characteristics of form, geologic materials, and exposure to waves (technically termed a "reach"), any attempt to protect a part of the shoreland will be unsuccessful in the long run, and may also exacerbate erosion conditions on adjoining lands. In such circumstances, the most efficient method is to protect the entire reach. This would require, of course, the agreement of all property owners on the reach to finance the undertaking. There would be, however, economic advantages of scale which could make it attractive.

Other structural responses include: the erection of fences on dunes; construction of well-designed drainage systems on bluffs, or even re-shaping the bluffs, to prevent runoff erosion and slumps; and, in the case of flooding, the flood-proofing of buildings.

10 St. Lawrence-Eastern Ontario Commission, A Report on Coastal Resources, p. 68.
11 Housley, John G., "Shore Protection: Yes, at a Price", Water Spectrum, Summer 1978, pp. 1-9.

One remedial response which uses natural protective material involves the preservation or planting of vegetation on dunes and on the top of bluffs to reduce wind or water-related (surface runoff, for example) erosion and slumping. Obviously, this approach, while strengthening the landforms, does not prevent wave erosion and is often used in conjunction with structural measures, particularly on bluffs.

National Flood Insurance Program

Structural and non-structural measures and combinations thereof, are allowable alternatives under the National Flood Insurance Program which offers subsidized premium rates for insurance against property damage caused by flooding and flood-related erosion. Property owners in a community which is participating in this program may purchase insurance, provided the local government regulates development in the flood hazard area. Regulation includes requirements for floodproofing of buildings and restrictions on their siting in the floodway. A special National Flood Insurance Program regulation is applicable only to the marine coast - the delineated Coastal High Hazard Areas of those lands subject to high velocity waters. Designation of those areas has been made in the majority of communities on the marine coast (a notable exception being New York City where a study for subsequent designation is under way). The principal requirements of this regulation are that new construction or substantial improvements in such areas must be located landward of the mean high tide line and elevated above the 100-year flood level with space under the first floor to permit tidal or storm waters to pass freely. Additionally, man-made alteration of sand dunes which would increase potential flood damage is prohibited. State-owned and State-financed facilities are subject to special regulations to ensure that public investment in hazard areas is limited.

The National Flood Insurance Program also provides for the sale of subsidized insurance against flood-related erosion to residents of communities participating in the overall program. However, the regulatory part of this program, which by law must include restrictions on building in flood-related erosion hazard areas, has not been initiated because the Federal Insurance Administration (FIA) has not issued final regulations due to some fundamental problems. First, there is considerable difficulty in ascribing property damage to flood-related erosion as opposed to other erosion which, it is argued, is constantly occurring at various rates on erodible shorelands. Second, reliable measurements of land recession rates due to flood-related or other erosion are not available. Those problems may force substantial revision or termination of this part of the National Flood Insurance Program in the near future.

It has been alleged that the National Flood Insurance Program, despite its aims, may be encouraging the development of coastal hazard lands, not only in the case of flood-related erosion areas where, as stated above, no regulations are in effect, but in flood-prone shorelands, including Coastal High Hazard Areas. It is argued that with subsidized insurance available as greater security than a first mortgage, lending institutions are financing homes built on such shore areas as dunes which they previously would have shunned as high-risk locations.[12]

12 Rhode Island Coastal Resources Management Council, Briefing-II, "HUD Backs CRMC Flood Insurance Stand"; Anthony Wolff, "Swept Away", in New York, July 3, 1978; and New England River Basins Commission, Regional Report, June 1978, "Coastal Flooding: A New England Perspective on the Great Blizzard of 1978."

Another type of non-structural approach is the siting of buildings entirely out of the hazard areas. This is the most economical of all the approaches as it avoids the various difficulties, including the high cost, of constructing protective structures, and involves neither direct expenditures nor subsidies from the taxpayer. Yet, as indicated earlier, it is an approach which has been widely ignored along the State's coastline. The section of the National Flood Insurance Program dealing with floodplain regulation does require, in part, that new structures or substantial improvements to them be elevated above the flood protection level or out of the hazard area. However, there is presently no data of equivalent status for the State's erosion hazard areas. This means that prospective purchasers of shorefront property may not be aware of the risk potential and that many owners of buildings in such areas may not have sufficient information to make prudent investment decisions on proposed improvements or to calculate the benefits of installing protective structures (for example, the trade off among: the time left before land erodes; the remaining life of improvements; and, the cost of a protective structure). Despite the clear public interest in reducing both flooding damage and erosion damage, there is currently no basis in the State for implementing a similar regulatory framework for the latter. Limited recession rate data is available for much of the coastal area in a number of studies done by federal, state and university research centers. Cartographic, photographic and other methods suitable for the determination and confirmation of such rates is also available. However, the data must be carefully scrutinized for reliability; otherwise attempts to resolve the erosion problem by regulation could be compromised. The United States Corps of Engineers and Federal Insurance Administration could be valuable sources of technical and financial assistance in ensuring the quality of those essential data.

Disaster Aid

The last type of response is disaster aid to communities threatened by or suffering from the effects of flooding and erosion. This aid includes materials, grants and loans from federal, state and local sources. In most instances, the need for such assistance reflects the failure to apply an efficient combination of the other approaches, structural and non-structural. In that regard, the Federal Department of Housing and Urban Development is preparing rules to implement the provisions of Section 406 of the Disaster Relief Act of 1974 (PL 93-288: 42 USC § 5121 et. seq.) which requires state and local governments to take actions, after federal disaster relief has been provided, to mitigate the natural hazards involved, including safe land-use and construction practices.[13] The Disaster Relief Act also states that only communities participating in the National Flood Insurance Program are eligible for certain types of aid.

Role of Government

An important issue on the Great Lakes and marine coasts relates to public sector activities in providing such large-scale structural solutions as major groin fields, bulkheads, beach nourishment, sand-bypass devices, dune-building and channel protection. The federal government is the principal source of those

13. 24 CFR, 4210-01, July 12, 1978.

activities with the United States Corps of Engineers assigned the greatest responsibility. Generally, the Corps is authorized to become involved in shore, hurricane and tidal and lake flood protection studies and projects on the Great Lakes and marine coasts as well as riverine areas. A fundamental principle of Corps activities in this area is that their work may not include the protection of private property unless such protection: (1) is incidental to the protection of public property; (2) would result in public benefits; or (3) is necessary to mitigate shore damages on private property caused by Federal navigation works.[14] Most Corps projects also require cost-sharing with state and local governments, ranging from 50% to 30%, depending on the nature of the project. In most instances, state and local interests must assume the burden of maintenance of a project, typically ten years from the initiation of construction.

The largest Corps projects on New York's shorelands are on the marine coast on Staten Island and along the southern shore of Long Island, principally because almost all of the extensive beaches are in public ownership and are used heavily by the metropolitan area residents. Projects in this region encompass combinations of such works as: (1) jetties to stabilize channel entrances between segments of the barrier islands; (2) dredging in those channels and elsewhere and redeposition of the sand on beaches downcurrent from the channels to continue the longshore transport effect or to nourish beaches upcurrent; and (3) the building of groins to prevent further erosion of beaches. Many of these projects are controversial, reflecting the dynamic nature of the coastal processes, the regulations regarding private property, and their substantial cost, particularly in regard to the state/local requirement.

Several of those elements are seen in the ambitious project to protect 83 miles of coast from Fire Island Inlet to Montauk Point at an estimated initial cost of $130,250,000 (exclusive of $846,000 annual expenditures for beach nourishment).[15] Only 5% of this project (authorized by Congress in 1960) has been completed; seventeen of fifty groins and 2,000,000 cubic yards of fill are in place. However, the groins, while stabilizing the beach upcurrent, are alleged to have caused heavy erosion to the west and consequent storm damage to shorefront homes there in early 1978. Additional groins were proposed to solve that problem, but there has been considerable debate at the local and county level as to the efficacy and cost of the entire project.[16]

In another case, the Corps is proposing to build up the heavily used beach at Coney Island by widening it and building a terminal groin at its west end. However, the residents of Sea Gate, an adjacent private community, have criticized the proposed project, because the groin would cut off the longshore current supply of sand for their beach (which is already heavily eroded) and would leave the developed shoreline unprotected.

Although some of the Corps' projects are single purpose (beach erosion, or hurricane protection), most are multi-purpose. On Lake Erie, a proposed project at Cattaraugus Creek will relieve flooding upstream by preventing ice jams, and longshore transport sedimentation at the mouth of the stream. The primary purpose

14 The Corps of Engineers may provide technical assistance to private property owners by its general studies on causes and methods of preventing erosion and flooding damage as exemplified by the demonstration project cited earlier.

15 Nassau-Suffolk Regional Planning Board, op. cit., p. 57.

16 Anthony Wolff, "Swept Away", New York, July 3, 1978.

of the project is to create a harbor of refuge to protect recreation craft from the dangerous waters of the lake. The majority of the Corps of Engineers large scale proposed projects on the Great Lakes shorelands related to coastal erosion and flooding problems are primarily initiated by the need for improved facilities for recreational boating.

There are also a few projects which the Corps is working on under their authority to handle smaller problems without direct Congressional approval, and many of these are in response to erosion or flooding. Examples include St. Columbans-on-the-Lake Emergency Bank Protection and Great Sodus Bay Harbor Shore Erosion.[17]

Lake Levels

A further flooding and erosion issue area pertains to high water levels on Lake Ontario and Lake Erie and the activities of the International Joint Commission (IJC).[18]

The International Joint Commission, established by treaty between the United States and Canada, exercises control over the rate of outflow from Lake Ontario, and thus influences the lake's level, by ensuring implementation of the "Order of Approval for the Regulation of Lake Ontario" (which it issued for the operation of the St. Lawrence Power and Seaway Project in 1958). This Order sets forth the range within which the lake level will be maintained, and the specific ways in which the often-conflicting interests of navigation, power and shoreline property owners are to be taken into account in regulating the lake's outflow. Direct responsibility for implementing the Order of Approval has been delegated by the International Joint Commission to its arm, the International St. Lawrence River Board of Control (SLRBC). The St. Lawrence River Board of Control has developed a Plan of Control (currently, 1958-D) to provide a systematic framework for its decisions.

In March 1973, when Lake Ontario was at a very high level, a severe storm caused extensive damage to shorelands and structures on the coast. Since then the lake's water levels have been more often in the upper part of the range set by the Order of Approval than in the lower half, and they have not been in the lower 25% of the range. Coastal property owners have been fearful of these continuing high water levels and have criticized the International Joint Commission for its failure to lower them.

The major criticisms of the St. Lawrence River Board of Control and the International Joint Commission by Lake Ontario shore property owners are as follows: (1) that in its day-to-day examination of level and flow data and implementation of the Order of Approval, the St. Lawrence River Board of Control tends to favor navigation and power interests over shore property owners who have no direct representation on the St. Lawrence River Board of Control;[19]

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17 U.S. Army Corps of Engineers, Buffalo District, Current Civil Works Projects of the U.S. Army Corps of Engineers Buffalo District, May, 1977, pp. 28-29 and 72-95.

18 See N.Y.S. Department of State, Coastal Management Program, Draft Regional Element - Great Lakes West, 1978, and St. Lawrence-Eastern Ontario Commission, Analysis and Recommendations Concerning High Water Levels, for detailed infomation on this issue.

19 At present, the five U.S. members' affiliations are: Army Corps of Engineers (2); Federal Power Commission (1); the Federal St. Lawrence Seaway Development Corporation (1); and the Power Authority of the State of New York (1).

(2) that the regulatory plan and Order of Approval should be re-examined to find ways to better accommodate the needs of shore property owners; and (3) that the International Joint Commission should investigate the feasibility of changing the capacity of the St. Lawrence River to allow a greater overall rate of outflow from Lake Ontario and thus a greater flexibility for regulating its level.

One action taken in response to these criticisms is the Lake Ontario Shore Protection Act of 1976 (PL 94-587, Section 180-a), which directs the Corps of Engineers" ... to develop a plan for shoreline and beach erosion control along Lake Ontario" ... and "... include recommendations on measures of protection and proposals for equitable cost sharing, together with recommendations for regulating the level of Lake Ontario to assure maximum protection of the natural environment and to hold shoreline damage to a minimum." The Act also requires that, until Congress receives a report on the study, "...all Federal agencies having responsibilities affecting the level of Lake Ontario shall, consistent with existing authority, make every effort to discharge such responsibilities in a manner so as to minimize damage and erosion to the shoreline of Lake Ontario." Although $2,000,000 was authorized for this plan, only $300,000 is in the current Public Works Appropriation Bill now being considered by Congress.

A more recent response resulted from a meeting held at the White House to discuss the lake level issue in April 1978 when the Corps of Engineers was asked to study a proposed change in the Order of Approval involving navigation. It is reported that the Corps of Engineers findings show that the proposal is impractical because only a five-inch drop in lake level would result from a 50% suspension of navigation in the St. Lawrence Seaway from October 1 to December 15 each year.[20]

A further complication in this issue has arisen from the proposed Winter Navigation Demonstration Project which would test the feasibility of extending the shipping season in the St. Lawrence Seaway. According to a recent study, a mimimum requirement for navigation could raise the weekly average water level on the lake by as much as 0.82 feet.[21] Governor Carey has expressed his opposition to this project on a number of grounds including the threat of flooding and erosion damage along the shores of Lake Ontario.[22]

The water level of Lake Ontario is tied not only to its rate of outflow but also to the inflow from the other Great Lakes. The International Joint Commission is now studying the possibility of regulating Lake Erie's water levels by dredging the Niagara River or the Black Rock Canal and by the building of large structures across the river or on Squaw Island. The mean monthly levels of Lake Erie have remained above the 1900-1977 average since 1974. These higher levels have not produced the scale of erosion effects experienced on the Lake Ontario coast because of the more erosion-resistant shorelands in Erie and Chautauqua counties. Nevertheless, the benefits of regulating Lake Erie could be significant to shoreline residents of these counties. There are, however, at least three possible conflicts apparent in this proposal. First,

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20 Discussion with representation of U.S. Corps of Engineers, District Office, Buffalo, NY.

21 U.S. Army Corps of Engineers, Survey Study for Great Lakes - St. Lawrence Seaway Navigation Season Extension: Preliminary Draft Main Report and Environmental Statement, July 1978.

22 Letter dated August 18, 1978 from Governor Carey to Lieutenant General J. W. Morris, Chief of Engineers, Deparment of the Army.

the release of more water than otherwise into Lake Ontario could further complicate the regulation of that lake. Second, the associated dredging and structures could substantially damage the major fishery resources in the Niagara River. Third, the location on Squaw Island of a diversion channel would compromise plans for the development of recreation and tourist facilities on this publicly-owned land.

The lake level issue is complex. The fluctuating flow of waters into and out of the Great Lakes system has produced at various times in the past, both low and high water conditions causing varying amounts of damage to the many interests which depend on the lakes' waters, or are situated on their shores. The issue, therefore, is not how to avoid entirely loss to any one interest, but, rather, how to ensure an equitable distribution of net benefits.

Program Policies

7.1 MINIMIZE THE DAMAGE TO PROPERTY AND TO NATURAL RESOURCES OF GREAT PUBLIC BENEFIT CAUSED BY THE EROSION OF THE COASTLINE.

Mitigation of erosion-related damages will require a combination of approaches. First, coastal communities must participate in the National Flood Insurance Program. Secondly, publicly financed erosion protection structures should be constructed in coastal areas only if they are necessary to protect human life, existing investment in development, or new development which is dependent upon a waterfront location. Lastly, where areas of critical erosion have been identified: (1) structures must be located so as to minimize damage that may result from erosion during their economic life; (2) new land use or development must not alter land areas such as beaches, dunes, barrier islands and bluffs if that alteration will worsen erosion on other lands; (3) new or reconstructed protective structures must be designed and built to provide long-term protection to sites, must not increase erosion of other lands, and must be properly maintained to minimize deterioration of the structures.

A. State Means for Implementing the Policy

1. Coastal Erosion Hazard Areas Legislation (See Appendix B)

This proposed law provides for the identification, mapping and designation of coastal erosion hazard areas by the State in cooperation with local governments. It also requires that local governments, within which such areas are located, adopt erosion hazard area regulations in accordance with guidelines set by the State. These regulations are to include minimum standards and criteria for the siting and building of structures and for land use and development within such erosion hazard areas. Provision is made for a county, or the State, to enact an erosion hazard area ordinance if a municipality fails to do so.

In recognition of the difficulties associated with the delineation of erosion hazard areas, the proposed legislation defines them as areas where erosion might be expected to damage structures within a period of forty years from the date such

identification is made. A fixed line would be drawn on a map showing the expected inland extent of erosion over the forty year period. All new development in such hazard areas would be reviewed to ensure that it is set back from the shoreline, as it exists at the time a permit is applied for, a sufficient distance to ensure protection from erosion over a thirty-year period.

Over time, this thirty-year setback line will move further inland as the shoreline erodes. If recession rate calculations are correct, this setback line will meet the fixed forty-year erosion hazard area limit ten years after its identification. Consequently, the proposed legislation requires that the limits of an identified hazard area be reviewed and adjusted at least once every ten years. The State will be required by this proposed law to provide technical assistance to local governments in the preparation and implementation of those ordinances.

2. Flood Plain Management Environmental Conservation Law, (Article 36)

This Law ensures that, if a community fails to qualify for the federal insurance program covering flooding and flood-related erosion damage, the state will develop flood hazard regulations for that community to make it eligible for participation in the program. The state is also required to provide technical assistance to communities with flood and flood-related erosion hazard areas. In addition, state agencies are required to ensure their activities in connection with state-owned land, the administration of state and state-assisted planning, and preparation of pertinent regulations and codes, will minimize flooding and flood-related erosion, and losses therefrom.

3. Public Lands Law (Article 2, et. seq.)

This Law provides for the transfer, lease, sale and use of state-owned lands, including underwater lands. It will be used to control the construction of erosion or flood protection structures on the coast, so that such structures will conform to the guidelines established under this policy as well as any standards or criteria promulgated for the proposed erosion hazard area legislation.

4. Protection of Waters Environmental Conservation Law, (Article 15, Title 5)

Under this Law, stream banks or beds, navigable waters of the State and adjacent estuaries and other waters may not be disturbed by excavation, filling or other action, nor may sizeable dams or docks be built unless a permit is granted by the State. A permit may be denied if the project will cause unnecessary soil erosion, increased water levels or the danger of flooding. This program's regulations should be amended to reflect the guidelines provided under this policy as well as any standards or criteria that may be promulgated for the proposed erosion

hazard area legislation.

5. See B., 3 below.

B. Local Means for Implementing the Policy

1. Regulation

In adopting and implementing an erosion hazard area ordinance as required by Environmental Conservation Law, Article 34 (proposed) cited above, a local or county government may use such police powers as zoning, subdivision or site plan approval regulations, as authorized by the Municipal Home Rule Law or other enabling legislation.

2. County Hurricane Protection Flood and Shoreline Erosion Control Districts (County Law, Article 5-B, § 280).

These special purpose districts are authorized for Suffolk County only. The purpose of a special district is to permit the financing of projects by assessment of only the beneficiaries of such projects.

The Law permits the construction or reconstruction of dunes, bluffs, bulkheads, dikes, groins, jetties, fills and other works and improvements upon lands which are publicly owned. The county is authorized to establish a district after approval by referendum. The project costs are apportioned among the beneficiaries by establishment of zones of assessment, with assessments proportional to benefits. This Law could be used to construct protective devices on long reaches of the coast where individual structures would fail.

3. Projects to Prevent Shore Erosion, Unconsolidated Laws (Section 7-1531 et. seq.).

This Law provides for construction of shore protection facilities when requested by communities on Long Island or New York City, both with and without federal participation. Projects are constructed by the Department of Environmental Conservation on lands owned by a municipality or in a beach erosion control district. The municipality must finance 30 percent of the construction cost and maintain the project after completion. Because of current federal involvement in beach erosion and hurricane protection in this area, joint state and local projects (excluding federal interests) have been limited to providing interim protection in Federal study areas or in areas where federal involvement is not warranted. However, the law can be used to provide for state-local participation in federal projects. Future protective structures which are constructed under the provisions of this law will be constructed only when there is a demonstrated need to protect human life, existing development or new water-dependent development.

4. Soil Conservation Districts Law (Article 2, et. seq.)

This aw provides for the formation of Soil Conservation Districts by counties to assist, by financial and other means, in the prevention of erosion and flooding, with federal financial and other support available under the Federal parent legislation, the Watershed Protection and Flood Prevention Law (16 USC 1001 et. seq.). The assistance available from this source is limited generally to shorelands not subject to wave action on open waters, but could be important in reducing erosion and erosion-related damages in bay and riverine areas.

7.2 DREDGING OR EXCAVATION IN COASTAL WATERS SHOULD NOT INTERFERE WITH THE NATURAL PROCESSES WHICH SUPPLY SAND TO SHORELANDS NOR CAUSE EROSION OF THOSE SHORELANDS.

Dredging or excavation will be permitted when essential for beach nourishment, navigation, flow control, pollutant removal, water-dependent uses, and mining activities. (See WATER QUALITY Policy 11.7). In such instances, consideration must be given to the possible effects upon water quality, land use and environmental resources.

A. State Means for Implementing the Policy

1. Protection of Waters, Environmental Conservation Law (Article 15, Title 5)

Dredging and filling activities in streams and navigable waters of the State are regulated by this law. In addition to their effects upon the natural beach and erosion processes, impacts upon water quality, land use and critical coastal resources will be evaluated prior to approval of essential dredging activities.

2. Tidal Wetlands Act, Environmental Conservation Law (Article 25)

Dredging activities within identified tidal wetlands are regulated by the rules promulgated under this Act. Generally, such activities are considered as an incompatible use and will not be permitted unless there is proof that these activities will be compatible with the preservation, protection and enhancement values of tidal wetlands. These values include significance of the wetlands to flood control and coastal processes.

7.3 MINIMIZE DAMAGE TO PROPERTY CAUSED BY THE FLOODING OF COASTAL LANDS PREFERABLY THROUGH THE APPLICATION OF APPROPRIATE LAND USE AND PERFORMANCE STANDARDS AND CRITERIA, OR WHERE NECESSARY, BY CONSTRUCTING STRUCTURAL FLOOD CONTROLS PROVIDED THEY ARE DETERMINED TO BE TECHNICALLY FEASIBLE AND ENVIRONMENTALLY AND ECONOMICALLY ACCEPTABLE.

A. State Means for Implementing the Policy

1. Flood Plain Management, Environmental Conservation Law (Article 36)

See discussion under Policy 7.1.

2. Flood Control, Environmental Conservation Law (Article 16)

This Law provides for the participation of the State in federal flood control projects initiated under 33 USC 701. The State will, however, participate only in those projects where it has been determined that they are technically feasible and environmentally and economically acceptable.

3. Public Lands Law, (Article 2, et. seq.)

Permits for the construction of structural flood controls on state-owned property would be required under this Law. In coastal areas, such permits will be granted only if the guidelines contained in the above policy are satisfied.

4. Protection of Waters, Environmental Conservation Law (Article 15, Title 5)

Structural flood control works which would disturb stream banks or beds and navigable waters of the State are regulated by this Law. In addition to satisfying the purposes of this Law, any proposed flood control project will be required to demonstrate its technical feasibility and environmental and economic acceptability.

B. Local Means for Implementing the Policy

1. Regulation

In adopting and implementing flood hazard area regulations, local governments can use such police powers as zoning, subdivision or site plan approval regulations, as authorized by the Municipal Home Rule Law or other enabling legislation.

2. County Hurricane Protection Flood and Shoreline Erosion Districts (County Law, Article 5-B, Section 280)

See the discussion under Policy 7.1.

3. Flood Control, Environmental Conservation Law (Article 16)

This Law provides for the participation of municipalities with the State in federal flood control projects initiated under 33 USC 701. As indicated previously, any projects to be constructed under this Law should comply with guidelines contained in Policy 7.3.

4. Soil Conservation Districts Law (Article 2, et. seq.)

See the discussion of this Law under Policy 7.1.

5. Environmental Conservation Law (Article 15, Section 2301, et. seq.)

This Law permits a county, municipal government, or person(s) to form a river improvement district, and by structural means, to better control the flows of a river, including the prevention of flooding. Such districts may be eligible for state or federal aid. The local costs are assessed to the beneficiaries. The use of this Law is restricted to the St. Lawrence River, the Hudson River (below the Troy Dam) and the Niagara River.

7.4 REDUCE THE QUANTITY OF DEBRIS IN NEW YORK HARBOR AND THE HUDSON RIVER.

A. State/Federal/Local Means for Implementation

1. New York Harbor Collection and Removal of Drift Project (authorized in PL 93-251, Section 91 as amended by Section 116 of the Water Resources Development Act of 1976)

This authorized federal project provides for the removal of drift debris and the sources of such debris in New York Harbor. The Coastal Management Program will encourage the Corps of Engineers to investigate the feasibility of extending its authority to include the rehabilitation of decaying waterfront structures and expanding its jurisdiction along the Hudson River north to the Troy dam.

7.5 PROPERTY OWNERS ALONG THE SHORELANDS OF LAKE ONTARIO SHOULD HAVE DIRECT REPRESENTATION ON THE INTERNATIONAL ST. LAWRENCE RIVER BOARD OF CONTROL.

A. State Means for Implementing the Policy

1. Regulation

The Governor and the Coastal Management Board, as the 306 agency, will use their available powers and take appropriate steps to ensure that the International Joint Commission, the United States Department of State, the United State Congress, and other appropriate federal and non-federal entities act to accomplish the above policy.

2. Federal Consistency

The federal consistency provisions of the Coastal Zone

Management Act will be used to require federal agencies to take all necessary actions for the enforcement of this policy. In addition, any actions that such agencies take in response to requests by the Board of Control or the International Joint Commission shall assess the impacts of such actions upon shoreline properties.

7.6 A STUDY BOARD SHOULD BE APPOINTED BY THE INTERNATIONAL JOINT COMMISSION, OR BY A UNITED STATES FEDERAL ENTITY, TO INVESTIGATE AND REPORT EXPEDITIOUSLY ON WAYS TO IMPROVE THE REGULATION OF LAKE ONTARIO's WATER LEVELS.

A. State Means for Implementing the Policy

1. Regulation

The Governor and the Coastal Management Board, as the 306 agency, will use their available powers and take appropriate steps to ensure that the International Joint Commission, the United States Department of State, the United States Congress and other pertinent federal and non-federal entities act to establish such a Study Board.

2. Federal Consistency

The federal consistency provisions of the Coastal Zone Management Act will be used to require federal agencies to take all necessary actions to enforce this policy.

Federal Program Requirement

In accordance with Section 305(b)(9) of the Coastal Zone Management Act of 1972, as amended, the federal Office of Coastal Zone Management has issued regulations (15 CFR, Subsection 923.26) which require that state Coastal Management Programs include a planning process for shoreline erosion/mitigation. The issue analysis, proposed policies, and existing and proposed state legislation presented above satisfy this requirement with the exception of that element of the regulations (§ 923.26(a)(4)) which require, in part, that the planning process include "a method for designating areas for erosion mitigation and/or restoration as areas of particular concern or areas for preservation and restoration." The Coastal Management Program will not designate coastal erosion hazard areas as generic Geographic Areas of Particular Concern (GAPCs). However, the criteria used for identification and selection of statewide GAPC's include several which encompass erosion and its effects. Application of these and other criteria have resulted in the nomination of site-specific GAPCs such as Napeague (Suffolk County) and Rye Playland Area (Westchester County) where control of erosion is among the problems to be addressed by the Coastal Management Program.

8.
Impacts of Outer Continental Shelf Development

8. IMPACTS OF OUTER CONTINENTAL SHELF ACTIVITY

Issue Analysis

Early in the 1970's, the federal government embarked on an accelerated leasing program for the purposes of exploring for and developing potential oil and gas resources in the Atlantic. This program, which has major economic, social and environmental implications, for the first time encompasses areas in the Atlantic Ocean along the East Coast of the United States, areas never before subject to oil and gas exploration, development or production. The general policy of the federal government toward the Outer Continental Shelf evolved from the fact that the United States has become increasingly dependent upon imports of oil from foreign nations to meet domestic energy demand and that the OCS may contain significant quantities of oil and natural gas.

The estimates of undiscovered oil and gas have been revised downward drastically. Nevertheless, the Continental Shelf may be an important domestic energy source for the Nation at a time when secure supplies are needed to minimize economic disruptions in the event that foreign sources are curtailed. It should be noted, however, that the contribution of OCS resources to the nation's overall energy supply is a short-term solution at best and will likely provide only limited relief from the nation's heavy dependence on imported oil.

The federal leasing program, heretofore administered under authority of the outmoded Outer Continental Shelf Lands Act of 1953, largely has involved transactions between the petroleum industry and the federal government with little or no involvement on the part of state and local governments. It should be noted that the leasing of OCS areas occurs for the most part beyond the three mile limit of the territorial sea, beyond the area over which states have any jurisdiction. Thus, the role of the coastal states in regard to OCS policy has been and continues to be advisory. Only recently, with the spread of the OCS leasing program to the "frontier" areas of the Atlantic and Alaska, have states become significantly involved with the process. In the last three years, the federal program has been significantly modified by administrative action to reflect state concerns and state/federal interaction. The Outer Continental Shelf Lands Act Amendments (OCSLAA), passed by Congress and signed into law by the President in late 1978, offers New York State, and other coastal states, the opportunity for more meaningful input to the leasing process since the amendments require federal coordination and consultation with governors of affected states and through them with local governments.

State officials have been working with the federal agencies to ensure that state concerns are incorporated into the federal decision-making process. The position taken by the state has been that OCS exploration and development proceed with maximum environmental safeguards and a minimum of risk to the residents of New York.

Though the State has attempted to meaningfully interact with the federal government on OCS exploration and development, it is constrained by a variety of problems inherent in the leasing process. First, under existing federal law, coastal states have little, if any, influence to affect changes in federal OCS policies. Federal/state institutional arrangements have helped to provide a

meaningful forum for discussion of issues, but without meaningful legislative authority, coastal states are limited in their actions. Second, coastal states suffer from a lack of information. Some of this information exchange will be helped by the Outer Continental Shelf Lands Act Amendments of 1978. Certain other information is presently confidential and will remain confidential. There can be no state response to the geology on a specific tract, for example, without the data to review. Thus, states cannot effectively evaluate regulatory actions for environmental protection in the absence of that data. Third, the ability of New York State in this regard has been hampered by the lack of financial resources to effectively maintain an adequate staff to formulate state policy and response to the great number of OCS issues. However, the OCSLAA of 1978 addressed this by providing for OCS state participation grants. Of course appropriations will be required in relation to this funding provision, a provision which was first proposed by New York State. Money has been authorized but at this writing none has been appropriated.

Because the Atlantic coastal states have had no previous experiences with the offshore oil and gas industry, an entirely new set of complex issues has been raised concerning both the positive and negative aspects of hydro-carbon resource development. One of the greatest difficulties inherent in the resolution of these issues lies in the fact that magnitude of these impacts can only be determined when the amount of economically recoverable resources is known. Although exploratory drilling recently began in the mid-Atlantic, the nature and extent of the resource is still unknown. Consequently, the impacts on the coastal states are also unknown.

New York State is situated between two leasing areas - the Baltimore Canyon (Mid Atlantic) to the south and the Georges Bank (North Atlantic) to the northeast. Because of its unique geographic position, the State must be able to assess the cumulative and synergistic effects of offshore drilling and related activities as they originate from both areas. The State must be prepared to cope with any impacts that the activities may have upon coastal resources. One lease sale already has been held in the Baltimore Canyon, and at least three more sales have been scheduled for both leasing areas.

OCS development on the East Coast may have both positive and negative effects. On the positive side, this new industry may provide needed jobs, a particularly important factor in areas presently experiencing economic problems. The number of jobs that will probably be available for New Yorkers will be insignificant when compared to the total work force of the New York metropolitan area. These jobs, however, could provide employment opportunities to those presently unemployed. Additionally, the industry could generate opportunities to start or expand ancillary industries that may remain long after the oil and gas resources have been depleted.

New York State could benefit from the potential energy supply from OCS development. A high find could prove an important supplemental source of energy for the state that could help to stabilize the energy situation, a situation which has contributed to the exodus of businesses from the state.

On the negative side, there could be environmental problems caused by oil spills and introduction of material such as drilling muds into the offshore environment. Major spills could have disastrous effects on the commercial and recreational fishing industries, and, if they reach the shoreline, substantial financial losses would accrue to the tourism and recreation industry. Generally,

OCS activities could create offshore water quality problems especially in localized areas near the platforms. Additional considerations relate to physicla interference with existing maritime transportation and commercial fishing operations.

It should be noted at this juncture that New York State's marine coastal area can be divided into two distinct sections--New York City and Long Island--each with different approaches to the OCS issues. The City of New York is interested primarily in attracting OCS-related facilities and specifically has encouraged the oil and gas industry to locate within the Port of New York. The Port has a wide range of underutilized and underdeveloped facilities which could easily accommodate the needs of the industry with few, if any, adverse impacts. An infusion of new job opportunities is a necessary ingredient to maintain the economic viability of the Port. On the other hand, the predominant feeling in the Long Island area is one of caution and concern. Given present conditions, Long Island is not expected to be a prime location for the siting of onshore facilities associated with OCS development. Thus, employment opportunities would be limited, if any. Offshore oil and gas activity would, however, increase the potential for oil spills that could affect the billion dollar tourism and recreation industries and the multi-million dollar fishing industry. In effect, Long Island communities feel that they are being exposed to serious risks while unlikely to receive significant benefits.

Overall, despite the uncertainties as to the amounts, mix and indeed the rate and possible lifespan of offshore oil and gas development and production and despite New York State's problems in seeking to channel that production and development to its benefit, the State must be prepared to secure the benefits and minimize potentially adverse impacts. These benefits and adverse impacts, if any, relate to: energy supply; economic development; environmental protection.

Energy Supply

If New York State can capture its fair share of the energy recovered from the Outer Continental Shelf, a high resource find may be an important supplemental source of energy supply for the State. This could prove to be an important reserve cushion at a time when the State is moving towards lessening its dependence upon imported petroleum during the remainder of the century. Under a high resource find, New York could meet 5% of its oil supply and 28% of its natural gas needs from Outer Continental Shelf resources over a twenty-year period. A low find could be expected to contribute 1% of the State's oil needs and 4% of its natural gas needs over a similar time period. These figures are based on projected demand and supply and assume that New York State would receive a share of OCS resources in line with its present proportion of Northeast oil and gas consumption.

This important supplemental source of energy could increase the energy supply options available to New York State and may reduce the need for curtailments or strict conservation measures during the next twenty years.

Economic Development

Besides the obvious economic and social benefits from increasing the state's energy supplies, OCS development and production could be the impetus for new industrial development and attendant jobs. New York State could receive both

direct and indirect economic benefits and costs as a result of OCS development if the State succeeds in attracting the industry. If significant "finds" are made, OCS development could generate approximately 2800 jobs and $50 million annually during the peak years. Perhaps more importantly, the introduction of a new industry could give New York City a needed psychological lift. Additionally, ancillary industries may prove to be an outgrowth of the primary facilities. Such ancillary industries would remain long after production has been completed. Based on employment estimates for a high resource find, some $2 million in state taxes would be generated as well as additional local income from local taxes. Another important aspect of OCS development is that new investment and capital for energy industries might shift to the East Coast and thus stimulate other investments in the area.

As to potential economic costs, oil spills could have drastic impacts on the tourism, recreation, and fishing industires of the State. A large spill in the Nantucket to Ambrose traffic lane could result in a range of direct weekly expenditure losses of between $2 million and $13.3 million to the billion dollar tourism and recreation industry. A 5% reduction in commercial harvesting of fish and shellfish, as a consequence of an oil spill or other OCS-related loss of fishing time, would result in losses of between $200,000 and $500,000 in the peak month of July. While minor reductions in harvesting can be absorbed by the industry as a whole, the complete loss of fishing time to a few individuals or firms for a month or even a week would cause extreme financial hardships.

Environmental Protection

Any oil and gas recovered must of course be brought ashore. This transfer, whether by pipeline or tanker, represents a hazard to the natural environment, most noticeably to water quality and to the fish, sea mammals and birds indigenous to the state's marine coastal area. Also potentially affected, should an oil spill occur, is the vegetation which plays such an important role in providing habitat for fish and wildlife.

The most significant environmental problem is the possibility of oil spills, both at the platform and in the transportation of crude oil by tanker. It should be noted that present tanker traffic along the Nantucket to Ambrose traffic lane poses a threat to the coastal resources of Long Island.

Based on the amount of oil and gas resources discovered, there is a 70% chance that there will be between 2 and 7 spills, each in an amount greater than 1000 barrels, over the life of the field in the Mid-Atlantic. The U.S. Geological Survey estimates for the North Atlantic field there is an 80% chance that there will be between 1 and 4 spills greater than 100 barrels. Numerous smaller spills can be expected in both areas.

Such spills notwithstanding, New York State's Long Island coastal area is particularly exposed to the possibility of oil spills from tankers using the Nantucket to Ambrose traffic lane. Insofar as tanker traffic along that route is increased by offshore production on the Georges Bank area, vulnerability of the many barrier beaches along Long Island's Atlantic Coast to adverse impacts is increased. It has been estimated that an additional 150 tanker trips per year (a 19% increase) will be generated in the Nantucket to Ambrose traffic lane if oil is found in the Georges Bank lease area.

Both major and minor spills could have adverse environmental impacts upon the fish and shellfish resources of the state as well as affecting the overall water quality of the area. While the short-term disruptions and environmental impacts due to spills are important, the long-term chronic effects could be more serious leading to potential impacts upon the recreational uses of coastal waters.

The commercial fishing industry is particularly vulnerable to oil spills both at sea and nearer to shore as well as in the many bays and estuaries of the state's marine coast. Waste products of the offshore drilling rigs, whether floating or cast onto the floor of the shelf, can pose addtional threatest to the fisherman and his gear. The federal government has recognized this threat by promulgating rules for disposing of materials used on offshore structures and by establishing a Fishermen's Contingency Fund through the Outer Continental Shelf Lands Act Amendments of 1978. The Fund can be used to compensate commercial fishermen for damages to their vessels and equipment and for loss of income caused by Outer Continental Shelf activities.

Although it is difficult to ascertain the environmental damages that would result from spills, there are other environmental problems posed by OCS activities, such as the dredging and laying of pipelines, and the effects of drilling muds and their introduction to bottom sediments. Related to these activities are possible geological hazards that may result in spills. Navigational hazards posed by drilling platforms in accepted traffic fairways also could be a problem. Adding to these problems is the questionable effectiveness of available technology for controlling oil spills under the severe weather conditions prevalent in the Atlantic, evident in recent spills.

Management of OCS Concerns and Impacts

New York State, as well as other states in Outer Continental Shelf frontier areas, has attempted to influence industry and federal government policies and activities in regard to the Outer Continental Shelf. It has done this by making both technical and policy recommendations to actions proposed by the federal government and industry which relate to the leasing, exploration, development, production and shut-down phases of the offshore oil and gas operations.

This effort has been undertaken with the hope that the responsible industries and federal officials would take heed of the state's recommendations, for New York has no authority beyond its three-mile territorial limit. Despite these difficulties, New York has succeeded, along with other coastal states, in influencing the federal government in its offshore policies and actions, through its substantive comments and the receptivity of the responsible federal agencies.

Evaluations have been made of operating orders issued by the U.S. Geological Survey, Department of the Interior, exploratory drilling plans and environmental reports developed by the industry, and environmental impact statements prepared by the Bureau of Land Management, Department of the Interior. The policies and actions set forth in these documents have been reviewed and addressed. Through such review of Outer Continental Shelf plans, policy guidance has been provided

to the Governor, the Legislature, and other state decision-makers. Recommendations have been made to these state officials as well as to members of New York's Congressional Delegation on changes to state and federal legislation oriented to protecting and enhancing the State's interests.

The recently enacted Outer Continental Shelf Lands Act Amendments (OCSLAA) of 1978 promise to give New York State, and other coastal states, more say in how any oil and gas resources off their coasts are explored for, developed and produced. Subsection 19 of this Act, entitled "Coordination and consultation with affected states and local governments", provides that the governor or the executive of any affected local government in the state may submit recommendations to the Secretary of the Inerior regarding the size, timing, or location of a proposed lease sale or with respect to a proposed development production plan. The Secretary, in turn, is required, after giving due consideration to the national interest and the well-being of the citizens of the state, to notify the governor as the reasons for his acceptance or rejection of the recommendations.

Program Policies

8.1 UNDERTAKE A LONG-TERM INVOLVEMENT WITH THE FEDERAL OFFSHORE LEASING PROCESS, MAINTAINING A STATE CAPABILITY FOR TECHNICAL INPUT AND POLICY REVIEW OF ALL RELATED FEDERAL ACTIONS AFFECTING THE COASTAL RESOURCES OF THE STATE, WHILE WORKING TO ANTICIPATE AND AMELIORATE ANY ADVERSE ENVIRONMENTAL IMPACTS TO THOSE RESOURCES.

While there are a number of federal activities dealing with OCS oil and gas exploration, development and production, one activity is particularly noteworthy in that the resources of the nearshore and onshore areas could be significantly affected. This activity relates to bringing oil or gas ashore by pipeline.

The Bureau of Land Management (BLM) of the Federal Department of the Interior has proposed the creation of workin groups, composed of both federal and coastal states' representatives, to plan for the transportation of Outer Continental Shelf oil and gas ashore. Industry representatives are also expected to participate. It is envisioned that the groups will be particularly concerned with pipeline location. It is not likely, due to the distance of the offshore lease areas, that any pipelines from the offshore fields will come ashore in New York. However, future leases could be closer to the state's coast, thereby increasing the possibility of pipeline landfalls in the state. If any pipelines do come ashore, marine coastal resources could be adversely affected unless efforts are made to avoid or reduce such impacts. The State may wish to locate pipelines in New York State in existing rights-of-way.

The State currently has programs which affect the siting and safety of oil and gas pipelines.

A. State Means for Implementing the Policy

1. Federal Consistency

Section 307 of the Coastal Zone Management Act provides a means for state involvement in the offshore leasing and development process. It mandates that an application for a federal license or permit affecting any land or water use in the coastal area must certify that the activities are consistent with a state's coastal management program. Thus, federal actions associated with OCS activities that may affect the coastal resources must be consistent with New York State's Coastal Management Program.

2. Outer Continental Shelf Lands Act Amendments of 1978

The 1978 amendment to the Outer Continental Shelf Lands Act provide for coordination and consultation between affected states and local governments and the federal government. They also provide that any recommendation by a governor of an affected state or the executive of any affected local government concerning a proposed lease sale or a proposed development and production plan must be accepted by the Secretary of the Interior, unless he determines in writing that the recommendations do not provide for a reasonable balance between the national interest and the well-being of the citizens of the affected state.

3. Outer Continental Shelf Lands Act Amendments of 1978 (Section 208 of Title II; Sections 302 of Title III; 2nd Section 402 of Title IV)

This legislation provides funding for continued and perhaps expanded state attention to the technical, administrative, management and policy implications of OCS exploration, development and production, and thereby ensure New York State's continued involvement in these activities.

These 1978 amendments also contain a number of provisions which can provide safeguards against environmental degradation (as well as in some cases avoiding economic loss). Section 208 of Title II requires the Secretary of the Interior to prepare a five-year leasing program, indicating size, timing and location of all leasing activities. An Outer Continental Shelf Oil and Gas Information Program is also authorized by Section 208. It will provide coastal states with information such as an estimate of reserves, the size and timing of development (if any), location of pipelines, and the location and nature of onshore facilities. Section 302 of Title III establishes an Offshore Oil Spill Pollution Fund financed by a per barrel tax on the amount of oil obtained from the Outer Continental Shelf. Section 402 of Title IV creates a Fishermen's Contingency Fund to compensate for damages to commercial fishing vessels and equipment and for loss of income caused by certain Outer Continental Shelf oil and gas activities.

4. Coastal Energy Impact Program (Coastal Zone Management Act, Section 308 and Outer Continental Shelf Lands Act Amendments of 1978, Section 501 of Title V)

   The Coastal Energy Impact Program (CEIP) provides funds to units of local government and regional and state agencies to assist them in dealing with the environmental, social, and economic impacts of OCS development and other energy-related facility development. The Coastal Management Board, as the 306 agency, will direct funding under this program to assist in anticipating and possibly ameliorating any adverse environmental impacts resulting from these OCS activities.

5. State Energy Master Plan, Energy Law, (Article 5, Sections 3 and 4)

   The State Energy Office is directed by this Law to develop a statewide energy master plan. Among other concerns, this plan must take into account the impact of national energy policies on the state's energy requirements and on the available energy supplies.

   As part of this planning effort, the New York Gas Group is required to develop bi-annual forecasts for the next five, ten, and fifteen year periods of the peak day, winter season and annual gas requirements. While doing so, it is to identify potential sources of gas supply and the facilities necessary to meet the projected gas requirements. Any gas produced on the OCS beyond three miles will, of course, be developed and produced under regulations promulgated by the Federal government. Federal consistency provisions will be applied to such regulated OCS activities to ensure compliance with the State's energy plan and its Coastal Management Program.

6. Water Resources Law, Environmental Conservation Law (Article 15)

   Proposals, including those to construct pipelines, which would excavate or deposit fill in the navigable waters of the state can only be approved by permits issued by the Department of Environmental Conservation.

7. Tidal Wetlands Act, Environmental Conservation Law (Article 25)

   The Tidal Wetlands Act requires that a permit be issued for uses, including gas and oil pipelines, in defined tidal wetlands. It must be demonstrated that proposed facilities will not adversely affect water quality, flood and storm control, marine food production, wildlife habitat, open spaces and aesthetically significant areas.

8.2 WORK TO ENSURE MAXIMUM ENVIRONMENTAL PROTECTION OF THE OUTER CONTINENTAL SHELF RESOURCES.

In order to maximize favorable impacts and minimize unfavorable impacts in the State's coastal regions, New York State must do everything in its power to minimize any adverse impacts beyond the traditional three mile limit. The State's opportunity to do so rests at least in part with those Federal programs briefly discussed under the previous policy.

Particularly pertinent to this policy are §208 of Title II, §302 of Title III, §402 of Title IV of the OCSLAA of 1978, briefly described in the section dealing with Policy 8.1, which requires that the Secretary of the Interior must accept recommendations by the governor or the executive of any affected local government concerning a proposed lease sale or a proposed development and production plan unless he determines in writing that the recommendations do not provide for a reasonable balance between the national interest and the well-being of the citizens of the affected state.

Other parts of the OCSLAA of 1978 that have an effect on protecting the Outer Continental Shelf are Section 302 of Title III and Section 402 of Title IV. Section 302 establishes an Offshore Oil Spill Pollution Fund financed by a per barrel tax on the amount of oil obtained from the Outer Continental Shelf. Section 402 creates a Fishermen's Contingency Fund to compensate for damages to commercial fishing vessels and equipment and for loss of income caused by certain Outer Continental Shelf oil and gas activities.

Also appropriate in Section 307 of the Coastal Zone Management Act, which contains the so-called federal consistency provision. Section 307 mandates that an applicant for a federal license or permit

affecting any land or water use in the coastal area must certify that the activities are consistent with a state's coastal management plan. Although the definition of exactly what OCS-related activities are included under the consistency provisions is still under discussion, the Congressional intent is clear - federal actions beyond state waters that may affect the natural resources of the state must be consistent with approved state coastal management programs. State objections to a plan may result in the nonissuance of a federal permit.

The State can also act in its own behalf by supporting operating regulations which have been promulgated for the offshore oil and gas exploration, development and production phases. Many of these regulations have been promulgated pursuant to the Federal Water Quality Improvement Act of 1970 and subsequently the Federal Water Pollution Control Act Amendments of 1972 and the Clean Water Act of 1977.

Similarly, efforts by the Intergovernmental Maritime Consultative Organization (IMCO) to reduce contamination of the marine environment from oily ballast water discharged from tankers can be viewed as positive contributions to protection of the resources of the Outer Continental Shelf, both offshore and nearshore. Efforts by the Federal Environmental Protection Agency and the Coast Guard to minimize transportation related oil pollution incidents are also of importance in regard to such protection.

8.3 WORK WITH THE OIL AND GAS INDUSTRY AND FEDERAL AGENCIES TO ENSURE THE STATE'S "FAIR SHARE" OF OCS ENERGY RESOURCES.

In his energy message to the New York State Legislature on February 8, 1978, the Governor outlined a comprehensive program to deal with the energy concerns of the state. The energy policy options and initiatives available to New York, however, will continue to be limited by the national and international energy situation and by federal policy initiatives.

The State Energy Office will be the lead agency in working with the oil and gas industries and relevant federal agencies to: encourage development of indigenous energy resources, including Atlantic offshore oil and gas; influence federal agency regulations and new federal legislation to guarantee the state's "fair share" of energy resources.

Recently the State Energy Office has established the State Energy Master Planning and Long-Range Electric and Gas System Planning process which will include an estimate of the contribution of OCS energy resources to the State's energy picture.

8.4 IN ORDER TO MAXIMIZE ECONOMIC BENEFITS TO STATE RESIDENTS, ENCOURAGE THE SITING OF OUTER CONTINENTAL SHELF RELATED SUPPORT FACILITIES IN: 1) ENVIRONMENTALLY COMPATIBLE AREAS OF THE COAST: 2) DEVELOPED AREAS OF THE COAST WHERE LABOR, HOUSING, COMMERCIAL ESTABLISHMENTS AND ASSOCIATED INDUSTRIES ARE AVAILABLE, THEREBY ENSURING THE LEAST DISRUPTION TO THE SOCIAL AND ECONOMIC INFRASTRUCTURE.

Particularly appropriate for location within New York State's coastal region are: 1) temporary and permanent support bases; 2) marine terminals; 3) pipecoating yards; 4) pipeline installation service bases; 5) steel platform installation or module construction bases; 6) repair and maintenance yards. Other OCS related support facilities may be located in the coastal region after careful study of their possible environmental impacts.

A. State Means for Implementing the Policy

Those Outer Continental Shelf related support facilities which are to be encouraged in the coastal area will locate there, if at all, through agreements between officials of local units of government and representatives of the offshore oil and gas industry. Any other OCS related support facilities having potential environmental impacts will be closely reviewed under existing laws which require permits.

The Coastal Management Board, as the designated 306 agency, will support the efforts of New York City and any other coastal urbanized communities seeking preferred Outer Continental Shelf-related support facilities that are compatible with the policies of the Coastal Management Program and that are, therefore, to be encouraged in the marine coastal areas. The Department of Environmental Conservation, with its responsibilities for OCS oil and gas leasing matters, may be expected to provide technical information and assistance in regard to potential OCS related facilities that may locate in New York State.

1. Water-Dependent Use Legislation **(See Appendix B)**

A draft of the proposed water-dependent use legislation has been developed as part of the Coastal Management Program. It would apply to coastal cities and requires them to establish areas suitable for water-dependent uses and give priority to such uses within those areas. Obviously, the types of uses cited above will be considered as water-dependent, and coastal cities will need to determine the necessity and desirability of locating such uses along their shorelines.

2. Commerce Law (Article 4, Section 100 (21 and 35) and Article 4-A, Section 117)

Aid can be provided to the local communities by the Division of Economic Development of the State Department of Commerce, which has the responsibility of encouraging industries to locate in New York State and of providing financial incentives, through various programs conducted by the Department, including those of the Job Incentive Board.

3. Tidal Wetlands Act, Environmental Conservation Law (Article 25)

Permits for uses in the defined tidal wetlands of the state are issued only after determining that the proposed activities will not adversely affect marine food production, wildlife habitat, flood and storm control, water quality and open space and aesthetic considerations. The Commissioner of the

Department of Environmental Conservation may, when granting a permit, require the applicant to meet prescribed conditions that will ensure that the productivity and qualities of the tidal wetlands will be maintained.

4. Water Pollution Control Act, Environmental Conservation Law, (Article 17)

Plans for municipal and industrial facilities which will discharge effluents into the state's waters must be reviewed by the Department of Environmental Conservation. Discharges high in phosphorus, nitrogen and other nutrients are to be minimized. Before construction, an industry must receive a State Pollutant Discharge Elimination System (SPDES) Permit. Such permits are granted when it is demonstrated that a facility will meet minimum standards with regard to discharges.

5. Water Resources Law, Environmental Conservation Law (Article 15)

Projects to dredge or deposit fill in the navigable waters of the state must receive a permit from the Department of Environmental Conservation. Only necessary projects will be permitted. These projects will be carried out with minimum adverse impacts.

B. Local Means for Implementing the Policy

1. Land Use Regulations (Village Law, Article 7 - Building Zones; Town Law, Article 16 - Zoning and Planning; General City Law, Article 3)

A local government may use its land use regulatory powers to enact zoning provisions which provide for the types and location of water-dependent uses. Such provisions should be consistent with OCS-related and other policies contained in the State's Coastal Managemnt Program. Through zoning and appropriate standards and criteria, local government can direct the siting of encouraged OCS related support facilities in desirable areas.

8.5 DEVELOP WORKABLE OIL SPILL CONTINGENCY PLANS FOR COASTAL AREAS OF THE STATE, WITH PARTICULAR EMPHASIS GIVEN TO LOCALITIES ALONG THE MARINE COAST.

Development and implementation of the provisions of oil spill contingency plans should result in better protection of overall water quality and fish and shellfish habitat. This policy is closely related to the issue of water quality and to fish and wildlife in and near the coastal region.

These plans when developed might also aid in clearing up the jurisdictional problems associated with oil spill response. At present the Federal Environmental Protection Agency and the Coast Guard have

responsibilities in the navigable waters of the United States. In New York State waters, the State Department of Transportation is tasked with the same job based on environemntal priorities set forth by the State Department of Environmental Conservation.

A. State Menas for Implementing the Policy

1. Oil Spill Prevention, Control and Compensation (Navigation Law, 170 et. seq.)

This law authorizes the Department of Transportation to develop oil spill contingency plans with the assistance of local governments and to license major facilities after certification by the Department of Environmental Conservation that the facilities have the capability to clean up spills. Cleanup must be in compliance with environmental priorities set forth by the Department of Environmental Conservation. The Coastal Management Board will work with both agencies to develop the priorities for such cleanup activities.

2. Substances Hazardous to the Environment (ECL, Article 37)

Pursuant to this law, the Department of Environmental Conservation has the responsibility of promulgating a list of substances hazardous to the environment and of regulating the storage and discharge of such substances. No industrial or commercial user shall store or discharge into the environment any substance identified by the Department in contravention to rules and regulations promulgated under this Law.

B. Local Means for Implementing the Policy

Local governments can work with the Department of Transportation in developing oil spill contingency plans for their coastal areas. Technical and legal assistance may also be obtained from the Department of Environmental Conservation and the Coastal Management Board. Local governments can utilize their general police powers to enact ordinances or local laws which will reflect the provisions of the oil spill contingency plans.

Local government involvement in the planning process, as well as in the attempts to prevent, curtail and clean up oil spills if they occur, should be directed particularly to the smaller, more common spills and should be geared to an immediate response for specified geographic areas.

8.6 STUDY THE FEASIBILITY OF ESTABLISHING THE TANKER TRAFFIC LANES FROM NANTUCKET TO AMBROSE FARTHER OFFSHORE

Previous studies have shown that any oil spills from passing tankships and tank barges are likely to have less impact on the shoreline of Long Island as the distance from land increases. However, tanker travel farther out to sea could expose the ships and barges to rougher sea conditions and would increase travel time.

The Coastal Management Board will work with the U.S. Army Corps of Engineers, the U.S. Coast Guard, other maritime interests, and representatives of New York City and Nassau and Suffolk counties in studying the advantages and disadvantages of moving the tanker traffic lanes farther offshore.

9.
Public Access

9. PUBLIC ACCESS

Issue Analysis

Public access to both the recreational and aesthetic resources of the coast is a key element in the management of coastal areas in New York State. The importance of public access to the shoreline is exemplified by the inclusion of a number of specific requirements in the Coastal Zone Management Act of 1972. These are designed to ensure that all citizens have the opportunity to enjoy, both physically and visually, the natural and man-made resources of the coast. The overall requirement is to "develop a planning process that can identify public shorefront areas appropriate for access or protection." This process must include:

1. A procedure for assessing public areas requiring access or protection;

2. A definition of the term "beach" and an identification of public areas meeting that definition;

3. Articulation of enforceable State policies pertaining to shorefront access and protection;

4. A method for designating shorefront areas (either as a class or site specific) as areas of particular concern or areas for preservation or restoration, if appropriate; and

5. An identification of legal authorities, funding programs and other techniques that can be used to meet management needs.[1]

The issue analysis and proposed policies for public access presented here will satisfy these requirements with the exception of Item 4, which deals with protection of public beaches and other public coastal areas of more than local environmental, recreational, historic, aesthetic, ecological or cultural value. This requirement is achieved in New York's program by designating such areas as Geographic Areas of Particular Concern. This process and the areas designated are discussed in Section VII and Appendix F of this report.

There are two principal components of public access: access to existing recreation resources, and access to the coastline at large. The first is linked to the coastal recreation issue discussed separately in this section of the report. Therefore, this public access discussion does not delve into the need for recreation facilities or resources, but focuses on problems in getting to the recreation resources, or in getting to the coastline at large. Land or facility needs for different types of recreation at the water's edge are dealt with in the recreation issue section.

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[1] The full discussion of requirements for shorefront access and protection planning is found in Section 923.25 of the Development and Approval Regulations for State Coastal Management Programs published by OCZM under date of March 1, 1978

People want to get to the coast to use beaches for swimming, sun-bathing, fishing, walking, or, simply for enjoyment of the scenery. A problem in many areas is lack of access to beaches. Thus, there is a need to identify existing and future beach areas requiring additional access. To aid in this identification, it is necessary to define "beach" as follows:

> A beach is defined within physical parameters as a zone of unconsolidated material that extends landward from the level of lowest water to the place where there is a marked change in natural or physiographic form (first line of terrestrial vegetation) or to the upper limit reached by the highest storm waves, which is the area subject to alternate erosion and deposition of beach material. The offshore limit of a beach is the mean low water line. A beach consists of both foreshore and backshore zones. Beach elements include dry sand areas, sand dunes, and areas of reasonably graduated slope to the water. Beaches are composed of a variety of materials, including sand, gravel, or pebbles. Areas composed of other materials may function as beaches when they are used for traditional beach activities.

Various forms of coastal beaches are found in New York State. Steep headlands fronted by narrow beaches are common along Lake Erie, Lake Ontario, the Hudson River, and the Long Island Sound. Barrier complexes, formed by a sequence of long, narrow barrier islands or bars, separated from the mainland by a lagoon or marsh, are found along the south shore of Long Island and the Port Ontario-Ellisburg region of Lake Ontario. Sandy beaches fronting the continuous ridges of sand dunes are also common, especially along the south shore of Long Island. Barrier spits are formed when littoral transport causes the projection of a sediment body into a bay; i.e., Rockaway spit and Southampton spit on Long Island. The bays and harbors that are found in many coastal areas of the state normally contain narrow beaches backed by bluffs or pocket beaches with associated dunes.

Access to the Coast at Large

There are two types of conditions which impede access to the coastline at large: development and private ownership of land which create man-made barriers to shorefront access, and natural shoreline topography or conditions which make access difficult or impossible. A large portion of New York's coastline is devoted to residential, commercial and industrial use. Along much of this shoreline, the existing land use patterns effectively block physical and visual access perpendicular to the shore, while private property rights that extend to the water's edge often restrict latteral access along the shore. An example illustrates this point. Most of the land along the Great Lakes is privately owned. Strip shoreline residential development predominates in rural areas, such as on the Lake Ontario shore between Buffalo and Rochester. Few points of access exist in these areas and non-residents are regularly faced with no trespassing signs on roads leading to the lake. Where public rights-of-way to the shoreline do exist, use of the shore itself is often restricted by private beach/no trespassing signs.

Transportation facilities are another major man-made barrier blocking access to the shore. Highways and railroads, both in urban and rural areas, often provide views of the shoreline and the water, but their presence usually makes it difficult to get to the shore. The railroad tracks and urban highways lining the Hudson provide, perhaps, the clearest illustration of this problem and indicate why the River has failed to fulfill its potential as a recreational amenity for the southeastern portion of the State. The railroad tracks follow both shorelines for long stretches; highways are located adjacent to the River in cities such as Albany and Poughkeepsie. Where these conditions prevail, the Hudson, aside from its visual value, remains detached from the community. Moreover, where significant parcels of public land do exist between transportation rights of way and the river, one's ability to reach it is often restricted because it is either too dangerous to cross the right of way or too expensive to provide a safe crossing. The need to provide safe pedestrian and vehicle crossings will become even more acute once high speed rail travel is begun.

Similar conditions exist along Lake Ontario, where the Lake Ontario State Parkway is a distinct barrier to physical access to the shore. In New York City, highways block access to the shore in much of Manhattan.

In many urban areas, there are numerous obstacles to increasing public access to waterfronts. In addition to industrial and commercial land uses, decaying piers, abandoned buildings, and unsafe neighborhoods have made the waterfront an undesirable location for almost any activity.

Opposition from the coastal residential community also serves to impede efforts to increase general public access to the shore. Community opposition, somewhat justifiably, is rooted in the fear that increased public access would lead to: 1) diminished individual enjoyment; 2) decreased value of private property adjacent to access points; 3) increased pollution, litter, and noise; 4) undesirable commercial development; and 5) intensified use conflicts as competition for waterfront space increases.

Visual access problems are caused by development patterns and specific structural designs that either block the coastline from view or intrude upon the scenic coastal landscape. The discussion on aesthetics contained in this Section deals with the particular problems of visual access.

Public access is also limited by natural shoreline conditions. Along parts of Lakes Erie and Ontario, Long Island, and the Hudson River, cliffs and steep slopes, while they provide great scenic value, preclude all but the most ambitious from shoreline use.

Access to Coastal Recreation Resources

The other major component of the public access issue is access to existing or potential coastal recreation resources. There are several factors associated with this concern. One relates broadly to transportation limitations and inadequate parking facilities. The lack of adequate public transportation to many coastal recreation areas effectively limits access for many people, particularly in urban areas. Of particular concern is the inability of urban residents to reach facilities located in suburban or rural areas. Related to this lack of public

transportation is the fact that the capacity of many coastal recreation areas is directly limited by parking capacity. Beaches are often closed, not when the facilities are crowded, but when the parking lot is full. In many instances, recreation areas could accommodate increased use by limiting automobile access and providing public transportation such as shuttle buses from remote parking areas.

Restrictions on use of public recreation areas to local residents exist in a number of coastal areas, such as along Lake Ontario and on municipal beaches of Long Island. These restrictions take the form of outright legal prohibitions against non-residents using the facilities, or more indirect means, such as restricting parking to residents only, allowing no parking on streets adjacent to beaches, and higher user fees for non-residents.

Program Policies

9.1 CONSISTENT WITH NATURAL RESOURCE PROTECTION AND PUBLIC DEMAND, PROVIDE FOR MAXIMUM PUBLIC ACCESS TO PUBLIC WATER RELATED RECREATION RESOURCES AND FACILITIES.

This policy calls for achieving balance among the following factors: the level of access to a resource or facility, the capacity of a resource or facility, the public demand for use of a resource or facility, and the protection of natural resources. The unbalance among these factors is most significant in the State's urban areas. Because this is often due to access-related problems, priority will be given to improving physical access to existing and potential coastal recreation sites within the larger cities of the State and to increasing the ability of urban residents to get to coastal recreation areas by improved public transportation. The particular water related recreation resources and facilities which will receive priority for improved access are public beaches, boating facilities, fishing areas and waterfront parks. In addition, because of the greater competition for waterfront locations within urban areas, the program will encourage mixed use areas and multiple use of facilities to improve access. Specific sites requiring access improvements and the relative priority the program will accord to each will be identified in the Public Access Planning Process (See policy 9.4).

A. State Means for Implementing the Policy

1. Acquisition

One of the most effective means of providing access to public beaches and other public areas of the type listed above is acquisition of real property, including either the full fee interest in real property or some lesser interest therein, such as an easement, or contractual right to use the real property. There are presently a number of specific statutory acquisition powers which could be used to implement this public access policy. The cited Parks and Recreation Law and the Environmental Conservation Law provide broad acquisition powers to the Office of Parks and Recreation and the Department of Environmental Conservation respectively.

The State Department of Transportation is authorized to acquire land for highway and specific transportation purposes, but these acquisition powers could be used to achieve their intended purposes as well as to implement coastal access policies. In addition to the basic power to acquire property for transportation facilities per se, such powers include "Acquisition of Property"... in order to provide multi-use areas adjacnet to state highways and recreational, natural and scenic areas along, but not necessarily contiguous to, state highways..." (Highway Law, § 22). This is a power which could be used to carry out a number of coastal policies involving actual physical access. The "multi-use areas" are to complement highway facilities. The statute provides that multi-use areas may include, but are not limited to walking, hiking, bicycle, and recreational vehicle trails, and there is express power to acquire less than fee interest. Acquisition for this program must be reviewed by the Department of State, the Office of Parks and Recreation and the Department of Environmental Conservation. The Coastal management Board will review such acquisitions which are located within the coastal area.

Acquisition for improved coastal access made by these agencies with coastal management funds or other funds will be consistent with the priorities described above.

2. Access Roads, Highway Law (Section 10 (37))

This section of the Highway Law gives the Commissioner of Transportation the authority, upon request of any head of a State agency, to construct an access road from a State highway to an agency facility (the agency would, however, be required to reimburse DOT for all incurred costs). Thus, access to coastal recreational facilities may be increased at these facilities where road access has been identified as deficient.

3. Parking Facilities, Highway Law (Section 10 (36) and (39))

Access is sometimes limited by inadequate parking, where providing additional parking at the site with a shuttle service of some type to the recreation area is appropriate. This section of the Highway Law will be used to provide parking facilities in coastal areas, at transportation interfaces or provide peripheral parking to urban areas.

4. Abandoned Railway Acquisition, Transportation Law (Section 18)

Railroads are a common feature of much of New York's coast and often restrict access to it. This section of the Transportation Law gives the Commissioner of the Department of Transportation the preferential right to acquire abandoned railroads, or to authorize other appropriate state agencies, or counties, cities, towns and villages to exercise a preferential acquisition right to such abandoned property. Where

such abandoned property would improve access to existing or proposed public recreation areas and there is no viable transportation use for it, the Commissioner should give priority to the public agency that has jurisdiction over such coastal lands. This Law contains a consistency provision stating that the actions of the Department of Transportation in determining preferential rights to right-of-way, where a conflict over use exists between one or more government agencies, shall take action consistent with the effectuation of State plans and policies. This provision plus the state consistency provisions of the Coastal Management Program indicate coastal management policies will influence the decision where a conflict exists. The Coastal Management Board will be notified of availability of abandoned rail transportation property.

5. Siting of Energy Facilities, PSL (Articles VII and VIII)

Many transmission lines are located in the coastal area. Use of their rights-of-way can provide a suitable means of assuring additional access to water related recreation opportunities. Under this Law a utility company is required to allocate an amount equal to two percent of the total construction cost of the transmission facility to a fund to be used for recreational development of the right-of-way. Where the right-of-way could be used for needed additional access, this provision of the Law will be employed to provide that access.

Because power plants generally locate along the coast and a large land area around the facility is often owned by the utility, these sites present significant opportunities for multiple use. At a minimum they can provide additional access to water-related recreation opportunities such as fishing.

6. Fish and Wildlife Management Act, Environmental Conservation Law, (Article 11, Title 5)

Environmental Conservation Law provides for a "Fish and Wildlife Management Practices Cooperative Program", the purpose of which is to: "...obtain on the privately owned or leased lands and waters of the state practices of fish and wildlife management which will preserve and develop the fish and wildlife resources of the state and improve access to them for recreational purposes by the people of the state." The program is used to provide, by agreement with landowners, public rights of access to such lands for hunting and fishing purposes. Within coastal areas, efforts to obtain agreements will reflect coastal management policies.

7. Public Access to Fishing Areas, Environmental Conservation Law (Sections 3-0305)

Pursuant to its general acquisition powers (see above) the Department has instituted a program to acquire public fishing access to lakes, rivers and streams, including provision of

boat launching sites. Substantial access has been provided through acquisition of easements on private lands. The Parks and Recreation Bond Act of 1960 and the Environmental Quality Bond Act of 1972 have provided a source of funds for such acquisition. (see Environmental Conservation Law, §51-0701). Within the coastal area acquisition will be made in accordance with the priorities established by the "access planning process" (See Policy 9.4).

8. State Comprehensive Recreation Plan, PRL (Sections 3.15)

The State Comprehensive Recreation Plan has a priority system for allocating funds available for outdoor recreation acquisition and development projects under State and Federal grant programs and the State Environmental Quality Bond Act. One of the positive-rated allocation factors is the degree to which the project contributes to the implementation of State plans such as that for Coastal Management. In addition, consistency between Coastal Management and the State Comprehensive Recreation Plan will be assured by the Board's review of such plan, and by the proposed, and by the State Coastal Management Act which requires state agencies to act consistent with the Program policies.

9. Parks and Recreation Law,(Section 3.09 (7-a))

The Office of Parks and Recreation is required to promulgate a comprehensive plan for the establishment of a statewide trails system. Trails are to include footpaths, bike ways, snowmobile trails, horse trails, cross-country ski trails, roads and other rights-of-way suitable for hiking, strolling, cycling, horseback riding, skiing, and other means of motorized and non-motorized travel for recreational purposes. Included are to be combinations and systems of trails, such as connecting and side trails, and trails leading to scenic and recreational areas.

10. Federal Coastal Zone Management Act, P.L. 92-583 (Section 315(2))

Once identified under the shorefront access planning process discussed under Policy 9.4, access to specific areas requiring point access across transportation facilities could be provided using, in part, funds available under this section of the federal Act. The Coastal Management Board would not actually acquire the property but would assist in funding an appropriate state agency to do so in accordance with state coastal management recommendations.

B. Local Means for Implementing the Policy

1. Regulation

Local government may establish zoning districts, where appropriate, which prescribe water related uses which facilitate public access for recreation. Open space and design criteria and standards may be established for large planned developments in order to ensure provision of shoreline access. Subdivision regulations may require that access to the shore be provided.

2. Acquisition

Local government has broad powers to acquire land for public purposes. These powers can be used to acquire fee or less than fee interest in land needed to increase public access to coastal recreation areas.

9.2 INCREASE OPPORTUNITIES FOR PHYSICAL ACCESS TO THE COASTLINE-AT-LARGE, CONSISTENT WITH NATURAL RESOURCE PROTECTION AND PROTECTION OF PRIVATE PROPERTY RIGHTS.

In coastal areas where there are no recreation facilities providing specific water related recreational activities, it is important that access to the coast at large be provided for numerous activities and pursuits requiring only minimal facilities for their enjoyment. These would range from gaining access for walking along a beach or a city waterfront, to simple access to a vantage point from which to veiw the seashore. Similar activities requiring access would include bicycling, birdwatching, photography, nature study, beachcombing, etc.

For those activities there are several methods of increasing access which will receive priority attention in the program. These include: the development of a coastal trails system; the provision of access across transportation facilities to the coast; the improvement of access to waterfronts in urban areas; and the promotion of mixed and multi-use development.

A. State Means for Implementing the Policy

1. Acquisition of Property for Construction of Bikeways, Highway Law (Section 22)

An important component of a coastal trails system would be the inclusion of bikeways, which are particularly desirable for providing access because they create few disturbances of the natural environment and are compatible with the protection of private property rights. This section of the Highway Law could be the principal means to acquire land for bikeways, since it authorizes the Commissioner of Transportation to acquire property for the purpose of constructing such facilities. Plans for any acquisition for bikeways will be submitted to the Coastal Management Board for its review and recommendation.

2. Abandoned Railway Acquisition, Transportation Law (Section 18)

Where railroad transportation property in coastal areas has been abandoned for railroad transportation purposes, the potential is high for conversion of the right-of-way to a coastal trails system that will increase access to the coast. This section of the Transportation Law gives the Commissioner of Transportation the preferential right to acquire abandoned railroads, or to authorize other appropriate state agencies; metropolitan or regional transportation authorities; or counties, cities, towns and villages to exercise a

preferential acquisition right to such abandoned property. The Law contains a consistency provision stating that the actions of the Department of Transportation in determining preferential rights to rights-of-way, where a conflict over use exists between one or more government agencies, shall take action consistent with the effectuation of State plans and policies. This provision plus the state consistency provisions of the Coastal Management Program indicate coastal management policies will influence the decision where a conflict exists. The Coastal Management Board will be notified of availability of abandoned rail transportation property.

3. Statewide Trails System, Parks and Recreation Law (Section 3.09 (7-a))

This provision of the Parks and Recreation Law could be used in conjunction with the above provision, since it requires the Commissioner of the Office of Parks and Recreation to promulgate a comprehensive plan for the establishment of a statewide trails system which may be implemented by the purchase and improvement of abandoned railroad rights-of-way. Through coordination with the Office of Parks and Recreation, the Coastal Management Program will ensure that development of trails in coastal areas receives a high priority, and within the coastal area the Coastal Management Board will identify areas where trail development should receive priority.

4. Highway Law (Article II, Section 22)

Recreational, scenic and natural areas adjacent to coastal highways enhance not only the setting of the highway, but can provide access to coastal areas that, for example, would otherwise be cut off by the highway. This applies to both rural and urban areas. This section of the Highway Law could be used to provide for such areas because it authorizes the Commissioner of Transportation to acquire property in order to provide multi-use areas adjacent to state highways, and recreational, natural, and scenic areas along but not necessarily contiguous to state highways. Multi-use areas can be used for such facilities as walking, hiking, bicycle, trail-bike, recreational vehicle, and snowmobile trails. Plans for any acquisitions will be submitted to the Coastal Management Board for its review and recommendation.

5. Article 40 of the Executive Law

This proposed legislation will be utilized to ensure that plans of state agencies (the Department of Environmental Conservation, Department of Transportation, and Office of Parks and Recreation) covering access opportunities give priority to projects serving to increase general access to the waterfront and are consistent with each other.

6. Plan for an Urban Cultural Park System, Parks and Recreation Law (Section 3.21)

This law requires formulation of a plan by 1980 for the creation of a statewide system of urban cultural parks, which are to include, among other areas of concern, consideration of urban waterways and other natural areas that offer active and passive recreational opportunities. Proposed urban areas for designation as urban cultural parks must be recommended by 1980. Through the use of the state consistency provision noted in (5) above, the Coastal Management Board will ensure that the plan for an urban cultural park system provides sufficient access opportunities to urban waterfronts included within the park.

7. Federal Consistency

The federal consistency provisions of the Coastal Zone Management Act will be used to ensure that federal actions or funding enhance or at least do not inhibit the improvement of access to the coastline at large in urban as well as in rural coastal areas.

8. Siting of Major Steam Electric Generating Facilities, Public Service Law (Article VIII)

Because power plants generally locate along the coast and a large land area around the facility is often owned by the utility, these sites present significant opportunities for multiple use, including access. Recognizing this, the law specifically provides for consideration of recreational use of power plant sites, which could, of course, include access to the shore. The law requires utilities to state "why the primary proposed location and source is best suited to promote the public health and welfare, including the recreational and other concerned uses which the site may serve." The Coastal Management Board will participate in the proceedings and will formally present to the Siting Board its recommendations on access.

9. Development of Transportation Corridors; Multiple Use Outside the Counties of Kings and Queens of Rights-of-Way, Transportation Law (Article 14-e)

All transportation facilities, especially those in coastal areas, have the potential for development of multiple-use activities, including recreation and its necessary component access, in their rights-of-way. This article of the Transportation Law could be used for general access purposes to coastal areas, since it gives the Commissioner of Transportation the power to provide for the multiple use of transportation facility rights-of-way in connection with the construction of such facilities. This applies throughout the State with the exception of Kings and Queens Counties (New York City).

10. Wild, Scenic and Recreational Rivers Act, Environmental Conservation Law (Article 15, Title 27)

This statute empowers the Department of Environmental Conservation to promulgate regulations for the control of land use and development within an area up to one-half mile from the banks of designated rivers. While this statute provides for police power regulations, not acquisition, the Commissioner of Environmental Conservation is authorized to order discontinuance of land uses, with payment of compensation. Along designated rivers in coastal areas where development patterns deter access, this power could be indirectly used to facilitate the provision of access.

11. State Nature and Historical Preserve Trust, Environmental Conservation Law (Article 45)

This program provides for acquisition, when authorized by act of the Legislature, of real property (including less than fee interests) and administration of lands, outside the Forest Preserve counties, "...of special natural beauty, wilderness character or geological, ecological, or historical significance." Wherever properties are purchased in coastal areas, an indirect benefit of the program could be the improvement of access to the coast for a variety of passive activities, provided physical access would not conflict with preservation of the resource.

12. Tidal and Freshwater Wetland Acts, Environmental Conservation Law (Article 24 and 25)

These acts contain authority for programs applying both performance standards and land use regulations for the protection of wetlands. The exercise of the police power in relation to wetlands is to be accomplished within the context of the broadly stated purpose of these acts. While public access is not specifically listed, several listed purposes relate to access, including recreational benefits ("provision of areas for hunting, fishing, boating, hiking, birdwatching, photography, and other uses"); "...education and scientific research by providing readily accessible outdoor bio-physical laboratories, living classrooms and vast training and education resources"; and "...open space and aesthetic appreciation by providing often the only remaining open areas along crowded river fronts and coastal Great Lakes regions..."

B. Local Means for Implementing the Policy

1. Acquisition

The broad powers given municipalities of New York State to acquire and develop real property for public purposes, including the provision of access, can be used to advantage by the municipalities participating in the Coastal Management Program to implement this policy. These powers would be especially valuable when used in combination with the access funding provisions under Section 315(2) of the federal Coastal Zone Management Act.

2. Regulation

There are a number of regulatory techniques which municipalities could undertake to increase access opportunities. They could require provision, through the site plan or special permit approval process, for open space and shoreline access; establish design criteria and standards for large planned developments which ensure provision of shoreline access; require access to the shoreline in residential subdivisions; or require "in lieu" fees for the acquisition of public access ways at other locations.

9.3 INCREASE VISUAL ACCESS TO AND ALONG THE SHORE AND PROTECT EXISTING POINTS OF VISUAL ACCESS

This policy parallels Policy 1.4 under AESTHETIC RESOURCES. Refer to that policy for a discussion of the state and local means for implementation.

9.4 MAINTAIN A PROCEDURE FOR THE IDENTIFICATION OF COASTAL AREAS REQUIRING IMPROVED PUBLIC ACCESS

Several state and local agencies participating in the Coastal Management Program identified specific sites in need of improved access for their functional or geographic areas of concern. These included fishing access sites identified by the Department of Environmental Conservation; boating access sites identified by the Office of Parks and Recreation; 33 areas of shorefront access concern identified by New York City; 51 sites requiring improved access identified by the Nassau-Suffolk Regional Planning Board; fishing and other access sites identified by the Erie and Niagara Counties Regional Planning Board; harbors of refuge and boat launching sites identified by the St. Lawrence-Eastern Ontario Commission; and numerous other types of access sites identified by individual counties participating in the program.

While most of the access site recommendations may reflect knowledge of the local area or specific functional plans they are not based on a single coordinated statewide access planning process. The New York City Department of Planning has developed a methodology for identifying shorefront areas appropriate for improved access. New York City tabulated the nature of the access issues for 33 areas. For three of these, detailed studies were undertaken consisting of: an examination of the study

area in terms of current community characteristics, recent trends, and future development plans; identification and evaluation of the current modes of access to the shore; identification of specific shorefront access concerns based on the above investigations; and recommended actions necessary to mitigate these concerns. The remaining identified areas will also be evaluated in this manner in the immediate future.

The Office of Parks and Recreation has also inventoried recreational facility capacity and undertaken supply and demand studies which can be applied to determination of access needs.

An outline for a single procedure for identifying, on a statewide basis, public shorefront areas appropriate for access has been developed as part of the coastal management process and is provided below. The procedure utilizes, in part, various methodologies and inventories already developed by the above-mentioned state and local agencies and the lists of specific sites needing access improvements. This procedure will satisfy the shorefront access and protection planning requirements of the Coastal Zone Management Act. Its application will result in a list of the specific access improvements to which the state will give priority. An inter-agency advisory committee will be established to oversee operation of the procedure.

I. Identify the types of public areas to which public access is desirable and a single planning process is appropriate for determining needed additional access.

   A. Beaches - definition of beach
   B. Fishing and hunting areas
   C. Boat launching sites and marinas
   D. Areas of outstanding aesthetic quality
   E. Waterfront parks
   F. The coast at large, to include other non-federal publicly-owned land.

II. Inventory existing public areas to which public access is provided and/or desirable.

   A. Beaches - an inventory and map of all areas which meet our definition of beach, including identification of those in public ownership. Sources are as follows.

      1. Office of Parks and Recreation Inventory of Recreation Sites
      2. Land Use and Natural Resource Inventory (LUNR)
      3. Office of General Services State Lands Inventory
      4. New York City Coastal Management Program
      5. Nassau-Suffolk Regional Planning Board Coastal Management Program
      6. St. Lawrence-Eastern Ontario Commission Coastal Management Program
      7. State Coastal Management Program Coastal Atlas (will map all beaches)
      8. National Oceanic and Atmospheric Administration's National Ocean Survey

B. Fishing areas - an inventory of sites to which the public has access for fishing purposes within the coastal area. Sources are as follows.

1. Office of Parks and Recreation Inventory of Recreation Sites
2. Department of Environmental Conservation's Fish and Wildlife Management Program
3. Office of General Service's State Lands Inventory
4. New York City Coastal Management Program
5. Nassau-Suffolk Regional Planning Board Coastal Management Program
6. St. Lawrence-Eastern Ontario Commission Coastal Management Program
7. Sea Grant

C. Boat launching sites and marinas - an inventory of all marinas and boat launching sites open to the public. Sources include all those listed under "A" above plus the Corps of Engineers, Sea Grant, and the Department of Transportation.

D. Areas of outstanding aesthetic quality - an inventory and map. Principal source is the Coastal Management Program inventory as depicted in the Coastal Atlas, plus National Oceanic Administration's National Ocean Survey

E. Waterfront parks - an inventory and map. Sources are as follows.

1. Office of Parks and Recreation Inventory of Recreation Sites
2. Coastal Management Program Coastal Atlas

F. Coast at large - a map and inventory of areas with general access to the shore. Sources include.

1. Office of General Services Inventory of State Lands
2. County tax maps

III. Describe the level and type of existing access at each site identified terms of mode, capacity, and condition. Major source is the Office of Parks and Recreation's Inventory of Recreation Sites.

IV. Assess the appropriateness of the above access relative to the capacity (physical and environmental) of the site to accommodate increased access and the present and future demand for use of the site.

V. Where increased access is appropriate, indicate the appropriate means for improving access and the agency's responsibility.

VI. Establish a priority system for areas where increased access is appropriate.

10.
Recreation

10. RECREATION

Issue Analysis

Because of their many special qualities, coastal areas are New York's most important recreation resource. Within these areas a narrow band along the shore provides a wide variety of water-dependent and enhanced activities. Coastal residents and visitors make the coast the most heavily utilized recreation area in the State. This intensive activity is an important contributor to the state's economy, with many coastal communities depending on the recreation industry for their economic existence.

The appeal and importance of New York's coasts for recreation purposes creates several concerns. The principal issue is: how can the special qualities of the coastal area best serve the demand for recreation, while ensuring that other land and water use needs will be accommodated and that the natural resource base will be protected? Flowing from this broad issue are several more specific coastal recreation concerns. These include conflicts with other uses of the coast; overuse of existing coastal recreation areas; a serious deficiency in water based recreation in urban areas; conservation of historic and cultural resources; meeting recreation boating and fishing needs; and the need to maintain the private sector's role in recreation.

Use Conflicts

Use conflicts are major barriers to coastal recreation. There are a number of land uses which require a coastal location but which restrict recreational use of the coast. For example, use of the shoreline for rail transportation on both sides of the Hudson River has limited physical access to the river. Yet, the economic value of the railroad to the State is such, that needs for recreation must be secondary to improved rail service. In urban areas, because the commerce and industry of an earlier day was heavily water-dependent, many commercial and industrial structures occupy shorefront locations. Many of these facilities still remain, often in a deteriorated or dilapidated condition, and block access to the shore. The cost of removal and land acquisition is often prohibitive to cities wishing to reclaim the land for parks and recreational use. Other barriers to recreational enjoyment in many places include the presence of industrial plants, nearby sludge and spoil disposal heaps, and elevated transportation routes. In rural areas, residential development along the shoreline consumes potential public recreation space as well as blocks access to the coast.

Use conflicts also take the form of destruction of resources necessary for recreation. Poor water quality plagues existing swimming beaches and limits development in some coastal locations. Water pollution is also a major deterrent to the growing sport fishery in the State. Toxic chemicals, such as Mirex, polyclorinated biphenyls and mercury, have resulted in fishing bans on some species in the Hudson River and Lake Ontario. Air and noise pollution additionally limit the recreational appeal of waterfronts for many outdoor activities.

Natural coastal processes create problems for recreation. Shifting and

bars intermittently block the openings to creeks and rivers, thereby cutting off boater access to the coastal waters. Thus, if boating access is desired, dredging of many creek mouths represents a continuing need. Heavy seas erode beaches and sudden storms create hazards for recreational boaters if adequate numbers of harbors of refuge are not provided. In addition, natural or artificial fluctuations in water levels can adversely affect fish resources by disrupting breeding habitats[1] and can severely reduce the size of beaches for swimming.

On the other hand, certain types and intensities of recreation activities pose very real threats to natural resources. For example, an embayment of estuary, which is now a productive fish and wildlife habitat, may be an ideal location for a harbor of refuge, and the attendant noise and pollution from motor boats and marine activity may disrupt the fish and wildlife habitat. Recreation development may also have an adverse impact on the character of existing shorefront residential areas by encouraging increased activity levels, commercial development, and other conflicts with existing development.

Excessive Use

Each recreation resource has a maximum user capacity. Overuse can impair the quality of the resource and the recreation experience. Thus, with the increasing number of people participating in varied recreation activities in coastal areas, there is a significant impact on the coastal resources of New York State. Excessive use has a number of effects. It can frequently result in water and noise pollution. Fragile coastal resources can be easily damaged. Such areas, including wetlands and dunes, may be damaged merely by excessive foot traffic. Other areas, such as islets and offshore rocks that provide protected bird sanctuaries, are often disturbed by any human intrusion.

Most coastal recreation has periods of peak use due to climatic constraints and existing vacation habits. The coastal recreation season is composed, for the most part, of weekends and the summer vacation months. This is an unavoidable complication encountered when providing parks and recreation facilities for a large population.

Urban Area Needs

In New York State, urban areas generally exhibit the greatest recreation deficiencies along with the highest use of existing facilities. Poor water quality, restricted coastal access, high development costs, and many alternative uses for limited space are among the factors which severely restrict the ability to overcome these deficiencies.

Of particular concern are the needs of the poor, elderly, and handicapped. Their ability to enjoy water-related activities is limited by the costs of some of these activities, restricted mobility (whether its cause is economic or physical) and the actual deficiencies of water-based recreation opportunities in urban areas.

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1 New York State Department of Environmental Conservation, "Environmental Assessment, FY 1979 Winter Navigation Demonstration on the St. Lawrence River," Technical Summary Volume, p. 32.

Historic and Cultural Resources

New York State is rich in historic and cultural resources, a number of which are preserved in state parks and other state and local facilities. These must be considered important recreational as well as aesthetic resources. Unfortunately, there is yet no program or law to prevent the owner of a significant historic resource from impairing its historic character or indeed, completely tearing it down. Many significant historic sites have been destroyed and only a handful of programs are available as disincentives to such destruction. There are other sites whose existence is threatened because of deterioration, lack of maintenance, or encroaching adjacent incompatible uses.

Recreational Boating and Fishing

Boating and fishing are significant recreational activites in the coastal waters of New York State. The fundamental requirement is to provide safe and desirable facilities to accommodate demand for these activities. While some areas have adequate facilities now, growing demand for these activities points to increased deficiencies in the future. A recent study has indicated that inland waters of the Great Lakes Basin are being used to capacity, and that future growth in recreational boating will tend to occur in the Great Lakes themselves.[2] The Department of Environmental Conservation has initiated a fish stocking program in both Lake Erie and Lake Ontario. This also promises to increase demand for boating facilities. A recent boating survey[3] shows the marina industry on Long Island as grossing $55 million annually, yet marina facilities are being lost to other more profitable land uses. At the same time, existing facilities are not meeting current demands. Public and private marinas report backup lists of 200-300 requests. Furthermore, an undocumented but apparent trend seems to indicate that demand for boat launching sites to service smaller boats is growing.

New York State has the potential for developing one of the best sport fisheries in the nation(of, policy section of FISH AND WILDLIFE). Realizing this potneital will require the provision of adequate support facilities at the shoreline. Among the facilities needed are a sufficient number of "Harbors of Refuge" along the shoreline of the Great Lakes. These harbors must be provided at suitable intervals so as to provide public access and safety in the event of rapid development of inclement weather. In addition, adequate public marina facilities, including boat launching ramps, docks and storage areas, must be provided for the sport fishermen.

Public Vs Private Ownership

Both the public and private sector provide recreation facilities. In most cases there is little or no overlap. For example, lodging is generally provided by the private sector and large developed beaches are generally accepted as a public responsibility. Where government and private enterprise are providing

2 New York State Department of Environmental Conservation, "Report on Regional Facilities in New York's Coastal Area", 1977.

3 Sea Grant Advisory Service, Cornell University, Ongoing Research of Recreational Boating on the Shoreline of Westchester County, New York City and Long Island, Ithaca, NY, 1974.

the same type of facilities, they usually serve different markets. However, in some instances, direct competition has developed. This can create economic problems for private enterprise and ultimately less service to the public should these enterprises be forced to go out of business or new business not be started. For example, in the Buffalo area serveral firms lost a significant number of their customers to a recently constructed state-owned marina. On the other hand, in some areas of the State, public marinas have attracted additional boats to the area and boatyard owners have concluded that public facilities actually helped their businesses.[4]

Often the laws and practices of the various levels of government have inhibited or at least not promoted cooperation with private enterprise in the provision of recreation facilities. Many jurisdictions do not permit the development of commercial facilities on public parkland.[5] The term of a lease to a private individual that a municipality may grant for operation on public land is limited by State law. Since large recreation facilities require a long amortization period, this limitation has discouraged private investment in some aspects of public recreation.

Because both public and private investment is necessary to ensure adequate recreation opportunities, the State must address the issue of how to assure that a mutually beneficial relationship evolves between private and public investment in recreation facilities.

Program Policies

10.1 GIVE PRIORITY TO WATER-RELATED RECREATION OVER NON-WATER-RELATED RECREATION IN THE DEVELOPMENT OF STATE PARK FACILITIES AND IN THE ALLOCATION OF STATE AND FEDERAL FUNDS FOR THE DEVELOPMENT OF RECREATION FACILITIES.

Water-related recreation includes such obviously water-dependent activities as boating, swimming, and fishing as well as certain activities which are enhanced by a coastal location and increase the general public's access to the coast such as pedestrian and bicycle trails, picnic areas, and passive recreation areas that take advantage of coastal scenery.

Provided the development of water-related recreation is consistent with the preservation and enhancment of such important coastal resources as fish and wildlife habitat, aesthetically significant areas, historic and cultural resources, and significant mineral and fossil deposits, it would generally be considered to have a higher priority than all uses except existing major transportation facilities and existing agriculture, commerce, and industry that is coastal dependent.

4 Noden and Brown, The New York Commercial Marina and Boatyard Industry, 1972, pp. 31, 45

5 Bureau of Outdoor Recreation, National Urban Recreation Study, New York, Newark, Jersey City, 1977, p. 94.

A. State Means for Implementing the Policy

1. Parks and Recreation Law (Section 3.09)

This is the basic statue by which the Office of Parks and Recreation is given the power to acquire, establish, operate, and maintain state parks, parkways, historic sites, and state recreational facilities. This Law is employed by the Office of Parks and Recreation to implement the State Comprehensive Recreation Plan (SCRP) Priority System described below and is thus the vehicle by which the above policy can be carried out under the Priority System.

2. State Comprehensive Recreation Plan (SCRP)
Parks and Recreation Law (Section 3.15)

The State Comprehensive Recreation Plan has a Priority System to allocate funding for public park and outdoor recreation acquisition, development and rehabilitation projects under available state and federal grant assistance funds and State Environmental Quality Bond Act monies. One of the positive-rated allocation factors is the degree to which the project contributes to the implementation of the State Comprehensive Recreation Plan or other state, national or regional plans. Thus, this policy of the Coastal Management Program, because it is contained in a state plan, would require that projects proposed for coastal areas be evaluated positively under this Priority System if they are water-related or negatively if they are not water-related.

In addition, the Coastal Management Board will review the State Comprehensive Recreation Plan to ensure that it assigns priority to water-related recreational facilities and activities.

3. Federal Consistency

The federal consistency provisions of the federal Coastal Zone Management Act will be used to help ensure that water-related recreation has priority along the immediate shore. Federal actions or funding for the development of non-water-related recreation there will be determined to be inconsistent with the State's Coastal Management Program.

B. Local Means for Implementing the Policy

The broad powers given municipalities in New York State to acquire and develop real property for public purposes, including park and recreation, could be employed to implement this policy at the local level. These powers would be especially valuable when used in combination with funds available locally or from other sources such as the federal community development program.

10.2 INCREASE THE AMOUNT OF COASTAL RECREATIONAL FACILITIES IN AND NEAR URBAN AREAS.

The State's urban areas display the most pressing needs for coastal recreation activities, particularly swimming, boating, and fishing. Shorefront parks and paths, where they increase the accessibility to the shore, are also seen as a great need by the Coastal Management Program. Many urban waterfronts present opportunities for redevelopment that could include a substantial amount of new recreation facilities and open space.

A. State Means for Implementing the Policy

1. Parks and Recreation Law (Section 3.09)

This is the basic law by which the State, acting through the Office of Parks and Recreation, has the authority to acquire, establish and operate recreation facilities throughout the coastal region, including urban areas.

2. State Comprehensive Recreation Plan (SCRP), Parks and Recreation Law, (Section 3.15)

Given limited funds for development of recreation facilities statewide, the amount of such facilities can be increased in urban areas only if a clear priority is given to projects proposed for these areas. The State Comprehensive Recreation Plan Priority System, discussed under Policy 10.1 above, does attach high priority to those recreation projects which would alleviate the most critical needs or deficiencies in the area to be served. As noted in the issue analysis, many of the most critical needs exist in urban areas. Therefore, the State Comprehensive Recreation Plan Priority System will, through the priority accorded areas of high density, assist in achieving this policy.

3. Plan for an Urban Cultural Park System Parks and Recreation Law, (Section 3.21)

As an initial step in implementing this policy, there is a need to know where recreational opportunities exist in urban areas.

This Law could be used to make such determinations, because it requires formulation of a plan for the creation of a statewide system of urban cultural parks, which shall include, among

other areas of concern, consideration of urban waterways and other natural areas that offer active and passive recreational opportunities. Proposed urban areas for designation as urban cultural parks must be recommended by 1980.

B. Local Means for Implementing the Policy

1. Acquisition and Development

Municipalities in New York State have broad powers to acquire and develop real property for public purposes, including park and recreation purposes. The General Municipal Law also allows for acquisition of real property for open space purposes, which is closely associated with recreational pursuits in urban areas.

2. Regulation

There are several regulatory methods localities can use to provide for increased recreation in urban areas. Zoning districts can be created, where appropriate, for the protection of natural resources, such as wetlands or features in urban areas important for the development of certain kinds of recreation such as sandy beaches for swimming. Such districts can also prescribe selected water-related recreational activities or require the provision of open space as a condition of approval of major new developments which would then be used for recreation.

Flood plains or flood hazard districts which permit parks, marinas, boat landings, wildlife sanctuaries or other types of recreational uses not susceptible to substantial damage from floods can be created in urban areas.

Transfer of Development Rights (TDR) is a particularly valuable tool which can be used in urban coastal areas to provide for open space while permitting the development which otherwise would occur on that land to occur elsewhere in the locality.

Subdivision regulations can be used to require, as a condition of approval, the provision of lands for open space purposes where such developments occur in coastal areas. Such regulations also allow, in lieu of providing land, payment of fees to the municipality to be used for purchase of park and recreational land.

10.3 GIVE PRIORITY TO ACQUISITION OF LAND SHOREWARD OF MAJOR TRANSPORTATION FACILITIES WHERE THESE HAVE SIGNIFICANTLY REDUCED THE AMOUNT OF ACCESSIBLE SHOREFRONT LAND.

In many parts of the State, notably along the Hudson River, parts of Lake Ontario, and in many urban areas, major transportation facilities have been located directly adjacent to the shore for long stretches. This has reduced the opportunities available for development of recreational and other public uses of the shore. Therefore, a high priority will be accorded to the public acquisition of fee and less than fee interest in those few remaining parcels shoreward of the transportation

facility which have the potential for providing water-related recreation and public access to the shore. The railroads along the Hudson provide the clearest illustration of this situation. In only a few places is there sufficient land to develop recreation facilities. Exercise of right of first refusal by the State will be explored as one means for increasing the opportunities for development of water-related recreation facilities to meet present and future need.

A. State Means for Implementing the Policy

1. Parks and Recreation Law (Section 3.09)

This statute gives the Office of Parks and Recreation the power to acquire, establish, operate, and maintain state parks, parkways, historic sites, and state recreational facilities. This Law is used by the Office of Parks and Recreation to implement the State Comprehensive Recreation Plan Priority System noted below and is thus the vehicle by which the above policy can be implemented.

2. State Comprehensive Recreation Plan (SCRP) Parks and Recreation Law, (Section 3.15)

The method of directing priority to this policy by using the State Comprehensive Recreation Plan is the same as that expressed under Policy 10.1.

3. Parks and Recreation Law (Section 3.09(7-a))

Where railroad property in coastal areas has been abandoned for railroad transportation purposes, the potential is high for conversion of the right-of-way to recreational use and for increasing access to the land shoreward from the railroad. This provision of the Parks and Recreation Law gives the Commissioner of the Office of Parks and Recreation the power to purchase and improve those abandoned railroad rights-of-way as can be used to implement this comprehensive plan for the establishment of a statewide trails system.

4. Abandoned Railroad Acquisition, Transportation Law, (Section 18)

This section of the Transportation Law gives the Commissioner of Transportation the preferential right to acquire abandoned railroads, or to authorize other appropriate state agencies, metropolitan or regional transportation authorities, or counties, cities, towns and villages to exercise a preferential acquisition right to such abandoned property. The Department of Transportation is required to notify all interested state agencies of the availability of abandoned railway rights-of-way. The Coastal Management Board intends to notify the Department of Transportion that it is an interested state agency and thus be able to influence the uses of the rights-of-way in coastal areas. The Law contains a consistency provision stating that the actions of the Department of Transportation

in determining preferential rights to rights-of-way, where a conflict over use exists between one or more government agencies shall take action consistent to the extent practicable with the effectuation of all state plans, policies, and objectives. This provision fits in well with the state consistency provisions of the Coastal Management Act.

5. Highway Law (Article II, Section 22)

Recreational, scenic and natural areas located adjacent to coastal highways enhance not only the setting of a highway, but can provide access to coastal areas that would otherwise by cut off by the highway. This section of the Highway Law can provide for such areas because the Commissioner of the State Department of Transportation is authorized to acquire property for multi-use areas adjacent to State highways, as well as recreational, natural and scenic areas along, but not necessarily contiguous to, such highways. Multi-use areas can be used for such purposes as walking, hiking, bicycle, trail bike, recreational vehicle, and snowmobile trails. Plans for any acquisitions will be submitted to the Coastal Management Board for its review and recommendation. Therefore, the Board can influence such acquisition in accordance with Coastal Management policy.

B. Local Means for Implementing the Policy

1. Acquisition and Development

The broad powers given municipalities in New York State to acquire and develop real property for public purposes, including park and recreation, could be employed to implement this policy at the local level. These powers would be especially valuable when used in combination with the access funds available under the federal Coastal Zone Management Act.

10.4 PROMOTE THE ROLE OF THE PRIVATE SECTOR IN THE PROVISION OF RECREATION FACILITIES.

While the private sector responds to market conditions in making its investment decisions, government can be a positive or negative influence on these decisions. Clearly, depending on the quality of the planning that precedes it, public investment can either compete with or complement existing private enterprise. The Coastal Commission will seek greater cooperation through better communication with the private sector. Not only will direct competition be avoided, but private enterprise will be encouraged to continue its role in coastal recreation activities in conjunction with the ongoing traditional government role of ensuring that there is sufficient free access to publicly-owned and managed resources. The Town of Huntington employs a responsible approach to public/private cooperation. The Town is an initiator of recreation programs, but not always a

permanent provider. If a recreation program proves popular, the program is turned over to private groups (profit or non-profit) for operation. This technique can lead to expanded recreation programs. It is an approach which will be more closely examined by the Coastal Management Program.

A. State Means for Implementing the Policy

1. State Comprehensive Recreation Plan (SCRP)
Parks and Recreation Law, (Section 3.15)

Many types of recreation facilities can be provided by the private sector, thus enabling the public sector to allocate limited resources to those types of facilities which, by their nature, are not profit-making enterprises. The State Comprehensive Recreation Plan Priority System, discussed under Policy 10.1 above, assigns a low priority to those proposed public projects which "will tend to inhibit expansion of the private supply to meet recreation demand." Thus, the State Comprehensive Recreation Plan helps to implement this policy indirectly by discouraging the public sector from engaging in projects which the private sector could profitably provide.

2. Parks and Recreation Law (Section 3.09)

The opportunity for the private sector to provide recreational facilities in public parks is encouraged by this section. The Office of Parks and Recreation is empowered to encourage investment by the private sector for equipment and capital improvements for concession facilities that are operated at historic sites and other state park and recreation facilities. The maximum period for concession licenses was extended to ten years in 1977.

3. Federal and State Consistency

There are a number of programs administered by the State, partially funded from federal sources, which could be used to encourage private investment in recreation facilities in coastal areas. Included among these are programs funded by the Appalachian Regional Commission (Chautauqua County) and the Economic Development Administration. The Coastal Management Board will utilize federal and state consistency provisions as means of directing some of the available funds to those projects which would implement the above policy.

B. Local Means for Implementing the Policy

1. Regulation

Appropriate zoning regulations can be adopted at the local level to encourage privately operated recreation facilities. Zoning districts may be established, where appropriate, for the protection of natural resources and features important for the development of certain kinds of recreation. Such districts may also prescribe selected water-related recreation activities or require the provision of open space

as a condition for approval of new major development in coastal areas which could then be used for recreation.

Private recreation facilties such as marinas may be encouraged in designated flood plain or flood hazard districts which permit those uses which are not susceptible to substantial damage from floods.

2. Industrial Development

Municipalities have the power, under General Municipal Law (Article 18-A), to establish industrial development agencies which can be used, among other purposes, for the promotion, development, encouragement, and assistance of private sector activities to improve recreational opportunities for the people of New York.

10.5 DEVELOP RECREATIONAL MARINAS, PUBLIC BOAT LAUNCHING SITES, AND HARBORS OF REFUGE WHERE DEMAND IS GREATEST.

While provision of adequate boating services to meet future demand is a priority of this Program, the siting of these boating facilities must be consistent with preservation and enhancement of other coastal resources (see Policy 10.1) and with their capacity to accommodate demand. The State will develop boating facilities, and will assist localities in developing them, but will avoid competition with private boating development. Boating facilities will, as appropriate, include parking, park-like surroundings, toilet facilities, and pumpout facilities. Harbors of Refuge are particularly needed along Lake Erie and Lake Ontario. There is a need for a better locational pattern of boating facilities to correct problems of overuse of facilities, lack of facilities, or improperly sited facilities.

A. State Means for Implementing the Policy

1. Parks and Recreation Law (Section 3.09)

This is the basic law by which the State, acting through the Office of Parks and Recreation, can either directly develop such recreation facilities as referred to in this policy, as in state parks, or can cooperate with municipalities in their development.

2. State Comprehensive Recreation Plan (SCRP)
Parks and Recreation Law, (Section 3.15)

Given limited funds for development of recreation facilities statewide, the types of recreational facilities referred to in this policy can be developed where the demand is greatest only if a clear priority for such areas is given to proposed projects. The State Comprehensive Recreation Plan Priority System, discussed under Policy 10.1 above, can help accomplish this because it assigns high priority to those projects which would alleviate the most critical needs or deficiencies.

3. Harbors of Refuge, Navigation Law, Article 11, Section 141)

The growth of recreational boating on the Great Lakes, together with the unexpectedness and frequency of storms, had led to a need for additional harbors of refuge. This law authorizes the Office of Parks and Recreation to enter into agreement with the federal government and with municipalities to construct, operate and maintain such harbors. Priorities for locating harbors of refuge will be determined by the State Comprehensive Recreation Plan Priority System. It is particularly important that the location of such harbors be consistent with the preservation and enhancement of coastal resources so that resource use conflicts are avoided.

4. Local Marina Facilities, Navigation Law, Article 11, Section 142)

Municipalities can help meet the demand for marinas by participating in this program which authorizes state financial assistance to municipalities in the construction of local marine facilities, including those incidental to a harbor of refuge. Priorities for giving financial assistance to municipalities will be determined by the State Comprehensive Recreation Plan Priority System.

5. State Marine Facilities, Navigation Law, Article 11, Section 143)

This section of the Navigation Law authorizes the State to construct, operate, and maintain State marine facilities, including those incidental to a harbor of refuge. Priorities for location of these facilities will also be determined by the State Comprehensive Recreation Plan Priority System.

B. Local Means for Implementing the Policy

1. Acquisition and Development

The broad powers given municipalities in New York to acquire and develop real property for public purposes, including parks and recreation, can be used either alone to implement the policy or in conjunction with Section 3.09 of the Parks and Recreation Law referred to above. Section 3.09 provides that the Office of Parks and Recreation can cooperate with communities in the development of recreation facilities.

10.6 IN A MANNER CONSISTENT WITH SOUND RESOURCE MANAGEMENT PRINCIPLES, PROVIDE FOR INCREASED PUBLIC USE OF FISH AND WILDLIFE RESOURCES FOR RECREATION PURPOSES BY INCREASING ACCESS TO EXISTING RESOURCES, SUPPLEMENTING EXISTING STOCKS, AND BY DEVELOPING NEW RESOURCES.

(See Policy 7.3 under **FISH AND WILDLIFE** section for details on State and local means for implementation).

10.7 PRESERVE HISTORIC, CULTURAL, AND ARCHEOLOGICAL RESOURCES

The historic, archeological and cultural resources are broadly defined by this Program. There is concern not just with specific sites but with areas of significance, particularly within cities and within the immediate environment of specific sites. Preservation is also broadly defined to include a strong emphasis on adaptive reuse. While the Program is concerned with preservation of all such resources within the coastal boundary, it will actively promote the preservation of those historic and cultural resources which have a coastal relationship through, for example, the use of coastal management funds.

A. State Means for Implementing the Policy

1. Parks and Recreation Law (Section 3.09)

To ensure that the most significant historic, cultural, and archeological resources are preserved, acquisition and maintenance by the State are often necessary. This section of the Parks and Recreation Law authorizes the Office of Parks and Recreation to undertake such activities. The **Coastal Management Board, using coastal management funds, will assist the Office of Parks and Recreation in the preservation of** those resources having a coastal relationship. Acquisition of less than fee interests in property is allowed and thus will be used to increase the effectiveness of available funds.

2. National Register of Historic Places and Statewide Survey

Identification of historic, cultural and archeological resources in coastal areas is a necessary first step in the preservation process. The Office of Parks and Recreation oversees the continuing statewide inventory of properties with historic, architectural, archeological and cultural importance and makes nominations to the National Register of Historic Places.

3. State Nature and Historical Preserve Trust, ECL (Article 45)

This program provides for the acquisition and administration of lands and waters which should be preserved for their historical significance, among other purposes. The Environmental Quality Bond Act of 1972 (ECL, Article 51, Section 51-0701) is the current source of state funds to implement this management program.

4. State Environmental Quality Review Act, ECL (Article 8)

In calling attention to possible adverse impacts of projects or activities on historic, cultural, and archeological resources in coastal areas, this Act will be employed. It requires that an environmental impact statement be prepared for any state funded or licensed development activity that may impair the character or quality of these resources. The statement must describe the exact nature of the impact on

the historic resource. There is no provision, however, for prohibiting the project if the impact is found to be adverse.

5. Plan for an Urban Cultural Park System, Parks and Recreation Law, Section 3.21)

The preservation of significant historic and cultural resources in urban areas is an ultimate objective of this program. This Law requires formulation of a plan by 1980 for the creation of a statewide system of urban cultural parks. Implementation procedures for the plan are not provided for in this law. The role of the Coastal Management Board will be to ensure that the plan's recommendations for designation of urban cultural parks and the objectives to be achieved by such designation include consideration of those historic and cultural resources which have a coastal relationship.

6. Federal Coastal Zone Management Act (Section 306)

Limited funds could be used to assist in the preservation of historic structures related to coastal concerns. These funds could be used, for example, to restore a lighthouse.

B. Local Means for Implementing the Policy

1. Acquisition

Municipalities in New York State have broad powers to acquire real property for public purposes, including park and recreation. County, General, City, Town, and Village Law all have provisions that would allow acquisition of historic sites or structures for public educational and recreational purposes.

Section 247 of the General Municipal Law allows acquisition of real property for open space purposes, which could include historic, archeological or cultural resources.

2. Regulation

The General Municipal Law of New York, Section 96a, Article 5, allows the governing board of any county, city, town or village to "provide by regulations, special conditions and restrictions for the protection, enhancement, perpetuation and use of places, districts, sites, buildings, structures, works of art and other objects having a special character or special historical or aesthetic interest or value." This broad power granted to New York municipalities was recently upheld by the Supreme Court of the United States when used for historic preservation purposes. The case, Penn Central Transportation Company vs. New York (1978), established New York City's right to regulate development of historic sites by a landmarks preservation law. The Court found that the City's restriction of development on the parcel of land in question did not constitute a taking of the property. This precedent established by the United State Supreme Court should be helpful in subsequent court challenges. Transfer of development rights is one particular method that can be employed to preserve historic resources.

10.8 ENSURE THE CONSIDERATION OF RECREATION AS A MULTIPLE USE IN THE DEVELOPMENT AND MANAGEMENT OF PUBLIC FACILITIES IN COASTAL AREAS AND IN THE DEVELOPMENT OF WATERFRONT PROPERTY.

Many types of coastal recreation can exist in conjunction with public facilities or large scale private development. The Coastal Management Board will ensure, through state consistency provisions, that the state means described below are used as much as possible to implement its coastal recreation policies where the potential exists for multiple use for recreation purposes. Among the facilities with high potential for multiple use for recreation purposes are energy facilities, highways and other transportation rights-of-way, port areas, and major public institutions. Large scale private development along the waterfront can also be encouraged to provide for multi-use.

A. State Means for Implementing the Policy

1. Utility Transmission Facility Siting (Commission Opinion 72-3, Case #26108)

Transmission line rights-of-way are often suitable for recreational activities such as hiking, cycling, cross-country skiing or horseback riding. Many transmission lines are located in coastal areas. Under this Commission Opinion, a utility company is required to allocate an amount equal to two percent of the total construction cost of the transmission facility to a fund for the recreational development of the right-of-way. The program applies to electric transmission lines of 115KV ten miles or more in length, or for higher voltage lines of one mile or more. Municipalities traversed by any part of the right-of-way, as well as state and federal agencies, are eligible to use the fund, which provides fifty percent of the cost of any particular recreational development. The sponsor must pay the rest of the cost.

2. Siting of Major Steam Electric Generating Facilities, Public Service Law, (Article VIII)

Because power plants tend to locate along the coast and require a large land area around the facility, these sites present significant opportunities for multiple use. Recognizing this, this Law specifically provides for consideration of recreational use of power plant sites. It requires utilities to state "why the primary proposed location and source is best suited to promote the public health and welfare including the recreational and other concurrent uses which the site may serve."

3. Multi-use Areas Adjacent to and Recreational, Natural, and Scenic Areas Along State Highways, Highway Law, (Article 22)

Areas adjacent to highways in the coastal area can provide numerous opportunities for multi-use recreation. This part of the Highway Law could be used in this respect for proposed coastal recreation projects since it authorizes the Department of Transportation to acquire property adjacent to state highways for multi-use recreational purposes and along, but

not necessary contiguous to, state highways for recreational, natural and scenic purposes. Multi-use areas may be utilized for but not limited to hiking, bicycle, trailbike, recreational vehicle and snowmobile trails.

4. Development of Transportation Corridors; Multi Use Outside the Counties of Kings and Queens of Right-of-Way, Transportation Law, (Article 14-e)

All transportation facilities, especially those in coastal areas, have the potential for development of multi-use activities, including recreation, in their rights-of-way. This article of the Transportation Law could be used in coastal areas to provide for recreational projects since it gives the Commissioner of the Department of Transportation the power to provide for the multi-use of transportation facility rights-of-way in conjunction with the construction of such facilities. This applies everywhere in the state except in Kings and Queens Counties.

5. Acquisition of Reforestation Areas, ECL (9-0501)

Numerous recreational activities are compatible with reforestation and forest management. This Law can be employed in portions of the coastal area, particularly those areas adjacent to the Great Lakes and St. Lawrence River, where opportunities for reforestation are greatest and where the potential for development of coastal recreation is greatest. It gives the Department of Environmental Conservation the power to acquire lands for reforestation and for establishment and maintenance of forests for watershed protection, timber production and other forest products, and for recreation and other purposes. The reforestation areas must consist of at least five hundred acres of contiguous lands.

B. Local Means for Implementing the Policy

1. Acquisition and Development

The broad powers given municipalities in New York State to acquire and develop real property for public purposes, including park and recreational purposes, is basic to implementation of this policy at the local level. It allows a municipality, for example, to acquire and develop for coastal multi-use recreation uses excess property associated with a state institution or other facility.

2. Regulation

There are several regulatory techniques which can be employed by local government to implement this policy. Local governments can require, as a condition of approval, the provision of lands within major subdivisions for open space purposes. This requirement should be applied in all major subdivisions located in the coastal areas.

Local zoning or site plan approval ordinances may establish site design criteria and standards for large planned developments which can require the inclusion of recreation and open space uses within such developments.

10.9 PREVENT INCOMPATIBLE DEVELOPMENT ON LANDS IMMEDIATELY ADJACENT TO RECREATIONAL RESOURCES.

A. State Means for Implementing the Policy

1. State Environmental Quality Review Act, ECL (Article 8)

This Act will be employed to call attention to possible adverse impacts of development adjacent to recreational resources, since many types of recreation resources fall under the definition of "environment" in the Act. The Act requires that an environmental impact statement be prepared for any publicly funded or licensed development activity that may impair the character or quality of the recreation resource. The statement must describe the exact nature of the impact on the recreational resource. There is not provision, however, for prohibiting the project if the impact is found to be adverse. State Environmental Quality Review regulations (6 NYCRR Part 617.12) will be amended to require Environmental Impact Statement consideration as Type I action for any actions proposed within 500 feet of a recreational resource. Section 617.14 of 6 NYCRR Part 617 will be amended to provide the Environmental Impact Statement criteria for such actions.

2. Signs and Advertising Structures Restricted, Parks and Recreation Law (Article 13.07)

Signs and billboards are usually incompatible with the natural beauty of parks, including those in coastal areas. Accordingly, this provision of the Parks and Recreation Law can be employed in the Coastal Management Program to disallow signs or other advertising structures within 500 feet of the border of any state park or parkway unless a permit to do so has been obtained from the state agency responsible for the facility.

3. Protection of Areas Adjacent to Certain Resources

The State will use its own capital construction powers and permit-issuing powers to encourage or discourage development in certain coastal resource areas, many of which have already been identified and proposed for designation as Geographic Areas of Particular Concern. Coastal resource areas include those of agricultural, historic, recreational and scenic importance, and lands and waters immediately adjacent thereto. The Coastal Management Board will designate the affected resource areas in cooperation with state agencies and those local governments which have approved local coastal management programs. Once these areas are identified, state agencies will be required to undertake their permit and capital construction activities, (including funding for such activities) in a manner consistent with Coastal Management

Program policies for the identified areas.

B. Local Means for Implementing the Policy

1. Regulation

Local government has the power to create zoning districts which would ensure that land uses adjacent to recreation facilities are compatible, or to minimize the effect of any incompatibility through buffer area requirements.

Section 239-m of the General Municipal Law requires that any proposed zoning regulation, amendment to a zoning regulation, special permit or variance which would affect any real property within 500 feet from the boundary of a county or state park or other recreational area must be submitted to a county planning agency (or the appropriate regional planning agency if no county agency exists) for review. If the county planning agency disapproves the zoning proposal, the municipal agency having jurisdiction in local zoning matters may proceed with the disapproved regulation only after a vote of a majority plus one in favor. In addition, a resolution must be adopted setting forth the reasons for proceeding counter to the county recommendation.

11.
Water Quality

11. WATER QUALITY

Issue Analysis

One of New York State's major assets is its abundant water resources available to meet domestic, commercial, and industrial water supply demands. The tourist industries in the Eastern Lake Ontario and Long Island regions of the State thrive because of the distinctive water recreation and scenic values of these areas. Vast quantities of high quality water from Lake Ontario proved to be a key incentive for locating several breweries in upstate New York. The natural, deep-water harbor at New York City and the Hudson River provide an important transportation artery linking the Atlantic Ocean and upstate New York.

New York is committed to protecting and developing its water resources. Since 1962, the State has spent over ten million dollars to develop comprehensive sewerage studies. Under the Pure Waters Program established in 1965 and subsequent bond issues, voters have authorized nearly $1.7 billion for construction of sewage treatment facilities.

In 1975, the state, after bringing its long standing pollutant discharge control program into conformance with requirements of the Federal Water Pollution Control Act (FWPCA) Amendments of 1972 (PL-92-500), began application of the State Pollutant Discharge Elimination System (SPDES) which, like its predecessor programs, regulates municipal and industrial discharge of waste water and other pollutants into surface and groundwaters of the state.

Under the FWPCA, the State has also conducted basinwide water quality surveys (303(e)) and areawide water quality management (208)[1] studies. These studies provide a reassessment of the State's water quality problems and management needs. Their findings show that of the six primary water basins with greatest water quality management problems, four of them encompass New York's entire coastal frontage. In addition, these studies indicate that although the State has been able to make great strides in controlling water pollution from raw sewage and easily discernable industrial wastes, there remains an even more complex set of water quality problems including toxic substances, surface runoff and residual wastes. These problems are nationwide in scope and their significance has often been unnoticed until previously unregulated point source pollutants were eliminated. More attention is now being given to such pollution problems under the 1977 amendments to the FWPCA (the Clean Water Act, PL 95-217), with one of the ultimate consequences expected to be further significant improvement to coastal waters.

These close relationships between the consequences of state water quality and coastal management programs are precisely what was intended by Congress under Section 307(f) of the Coastal Zone Management Act of 1972, as amended. This section specifies that water quality management requirements developed under or pursuant to FWPCA, as amended, shall be the water pollution control requirements applicable under the Coastal Management Program.

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1 The references are to sections of the Federal Water Pollution Control Act of 1972 (PL 92-500)

Industrial Wastes Including Toxic Substances

New York presently regulates the direct discharge of industrial wastes into the State's surface and ground waters through its State Pollutant Discharge Elimination System. Most of these wastes are treated to some degree before being discharged. The effectiveness of such a permit program is dependent on the availability of 1) the information pertaining to the relative toxicity or degree of threat created as these wastes find their way into the environment and 2) availability of technology to treat these wastes. Without such information, certain chemical wastes may be unknowingly discharged into the environment in amounts greater than should occur, only to be discovered later to have dangerously adverse health effects. Such has been the case with the toxic industrial chemicals, Mirex and PCB's, which have created serious biological consequences in Lake Ontario and the Hudson River. Although the State has a firm grip on the regulation of the more conventional and easily discernable industrial pollutants, a lack of information restricts effective regulation of these toxic substances. The annual proliferation of new chemicals creates a tremendous challenge to state and federal agency efforts to monitor their production and distribution, establish discharge tolerance limits, develop treatment technologies and regulate their discharge into the environment.

Municipal Sewage Treatment

Through the State's 208 program, the twenty-year population projections used for determining municipal waste water treatment needs are being updated, refined and disaggregated to a minor civil division level. Procedures are being developed to ensure that facilities planning and design will be consistent with these revised projections. The construction of new and upgrading of existing municipal sewage treatment plants is funded with monies made available by the State Environmental Quality Bond Act of 1965 and Section 201 of the FWPCA.

Unfortunately, there have been delays in construction for several reasons including difficulty in financing the local share, length of lead time required for planning, design and site preparation, delays in the processing of applications and increasing costs. Hence, inadequately treated sewage is still polluting the state's waters, particularly in the vicinity of large metropolitan areas such as New York City.

Because of the high costs of conventional sewage collection and treatment systems, such facilities may not be economically feasible in many small communities and rural areas. Failure of on-site septic systems or absence of sewage treatment has resulted in excessive nutrient enrichment of surface waters, groundwater contamination and sanitary problems at a number of locations within the State's coastal zone.

Urban Stormwater Runoff and Combined Sewer Overflows

As New York State has progressed in treating industrial and municipal point sources of pollution, the relative significance of the pollution effects of urban stormwater runoff and combined sewer overflows has become more apparent. In many of New York's major urban areas, a single sewer system collects and transports sanitary sewage and stormwater runoff to the municipal treatment plants. During storms, the volumn of flow through the system exceeds the plant's treatment capacity. The excess, therefore, is not treated and is discharged directly into the receiving waters. Such discharges include nutrients, coliform and pathogenic bacteria, organic wastes, lawn and garden chemicals, animal wastes, petroleum wastes from streets and parking lots, road salt, garbage and other

assorted debris. Even where separate storm and sanitary sewer systems are used, such as on Long Island, untreated waters are discharged from the storm sewer systems with high levels of many of the same contaminants.

Untreated discharges have forced the closing of public beaches near Rochester, restricted shellfishing on Long Island, reduced dissolved oxygen levels in the New York and Buffalo Harbors, and may be contributing to degradation of groundwater on Long Island.

A major constraint to addressing the problems created by urban stormwater runoff and combined sewer overflows is the expense of structural control measures such as the installation of separate sewer lines, large underground storage systems or construction of large catchment basins. At present, federal financial assistance is not available for constructing stormwater treatment facilities. Non-structural methods such as control of lawn and garden chemicals and pet control ordinances may prove difficult to enforce because they often depend on voluntary citizen compliance.

In some parts of the coastal area, such as Long Island, there are close relationships between stormwater runoff and groundwater quantity and quality. These issues are discussed further in the sub-section on "Groundwater" on page IV-126.

Agricultural Runoff and Wastes

In recent years there has been considerable controversy over (1) the relative magnitude and significance of the pollution of state waters generated by agricultural activities and (2) the determination of which management practices are most cost-effective in mitigating the water quality impacts of agricultural operations. The non-point water quality problem associated with agricultural practices is the transport of nutrients, pesticides, herbicides, organic matter and sediment by storm runoff into surface waters. Silting in of fish spawning habitats, excessive growth of algae or rooted aquatic plants, decrease in dissolved oxygen concentrations and contamination of certain aquatic organisms are impacts associated with this water quality problem.

The variability in data from recent rural non-point studies makes it difficult to formulate a clearly defined, universal cause and effect relationship between a given agricultural practice and an associated water quality impact. A case by case examination of potential problem areas and application of "Best Management Practices" for specific problems at a given site is presently the most practical approach to handling agricultural and other rural land runoff problems.

Vessel Wastes

Commercial and recreation boat discharges of shipboard wastes (e.g., sewage, garbage, bilge and cleaning wastes) degrade surface water quality, particularly in enclosed embayments and estuaries where diluting water volumes are low and vessel usage may be high. Serious public health hazards may result when untreated vessel wastes are discharged near shellfishing areas, bathing areas or public water supply intakes.

The Coast Guard enforces federal regulations established by the Environmental Protection Agency in estuarine and Great Lakes waters. Federal sanitary vessel waste treatment standards, however, are less stringent than state standards. Present technological constraints for treating sanitary wastes, particularly on smaller recreational craft, make statewide enforcement of the state's stricter effluent standards impractical. Total vessel waste discharge prohibition is more feasible on an area-specific basis, i.e., near shellfishing and bathing areas, and where adequate pump-out and treatment facilities area available. Federal law now prohibits discharges near public water supply intakes.

Dredging and Dredge Spoil Disposal

Dredging is a useful management tool serving a variety of purposes such as navigation channel maintenance, marina and shoreline development, beach nourishment, and pollutant removal. Unfortunately, many adverse environmental impacts have been associated with the processes of dredging and dredge spoil disposal, particularly when the sediments being dredged are polluted.

During dredging operations, sediments are resuspended, mixed with water and thereby increases the potential for immediate release of contaminants into surrounding environments. When the dredged sediments or spoils are deposited at an open water disposal site, contaminants may be released slowly into the overlying water column for several years. Because of this threat, the federal government anticipates phasing out all open-water disposal of polluted dredge spoils by 1981.

Alternative dredge spoil disposal methods include inland disposal and placement behind diked enclosures. The shortage of available and suitable onshore disposal sites and the potential leaching of contaminants from such areas into adjacent ground and surface waters make these alternative methods expensive and not without their own environmental hazards. For example, New York State faces a difficult challenge in reference to the safe removal and disposal of sediments that are contaminated with PCB's from certain "hot spots" in the upper Hudson River.

Other important adverse impacts on the physical nature of coastal waters may result from dredging and disposal activities. These include changes in bottom topography, local water circulation patterns, and flushing, erosion and sedimentation rates. Biological effects, such as the loss of aquatic habitats (e.g., spawning grounds, nursery areas), may result from the physical and chemical impacts identified above.

Many of those environmental problems can be minimized through careful selection of the disposal sites and timing of the dredging and spoil disposal operations. Such efforts, however, are thwarted by a lack of relevant baseline data, e.g., location of important habitats, seasonal distribution of fish populations, local hydrologic conditions and sediment transport patterns.

Oil and Other Hazardous Substances Spills

The potential for oil and hazardous substances spills in New York's coastal waters is high because of the substantial amount of commercial shipping. The possibility of such spills occurring in these waters is increased near major urban centers, due to the location of numerous oil and other bulk storage facilities. Nearly 1,000 oil and hazardous material spills were reported in New York State in 1976. In addition to spills, many storage areas also present air quality and fire hazard problems.

The potential development of offshore oil and gas production along New York's Atlantic shore and the handling facilities essential to this activity increase the chances for spillage. The recent lifting of the ban on gas drilling beneath Lake Erie and the possibility of extending the Great Lakes navigation season increase the potential of the spillage of oil and hazardous substances in these coastal waters.

Cumulative effects on water quality and other environmental degradation may be as great or greater from a series of small spill incidents as they are from a single large spill. Consequently, a sophisticated surveillance and cleanup program is needed.

Adequate base line data indicating the distribution patterns of important living aquatic resources is necessary in order to identify critical areas where spill incidents would cause serious biological damage. The data would assist in the proper siting of facilities and transportation routes and would be utilized in establishing cleanup priorities for New York Harbor and the Hudson and St. Lawrence Rivers and other vulnerable areas along New York's coastline where there is intense shipping traffic.

Nutrients

An over-abundance of nutrients in coastal waters can cause them to be excessively fertile. Excessive growth of rooted aquatic plants, algae blooms, and the reduction of dissolved oxygen levels result. This, in turn, disrupts water-oriented recreational activities such as swimming, boating and fishing.

In marine waters, nitrogen is probably the limiting nutrient, while phosphorous is generally the limiting nutrient in freshwater. Nutrients do not generally create a problem in open waters. Recent episodes of anoxic conditions in the New York Bight indicate, however, that the effects of nutrient overload can extend to the outer continental shelf. The effects of nutrients are most severe in the numerous bays and harbors which line the coasts of Long Island and the Great Lakes.

Excessive nitrates in groundwater may create a health problem, especially when the underground aquifer system is the only source of drinking water. In Long Island, nitrate concentrations approach maximum drinking water tolerance levels, in some cases.

Nutrients are discharged into surface and groundwater from a variety of sources, including municipal treatment plants, urban stormwater, combined sewer overflows, malfunctioning septic systems, animal wastes, and agricultural runoff. For any given nutrient problem, a unique set of regulatory and structural measures may be required, depending on the nature of sources in a tributary watershed. These may range from the sewering of shoreline cottage development, to application of special agricultural management practices, or to nutrient removal at municipal treatment plants.

Groundwater

The relationship between land use activities occurring in the vicinity of ground water aquifer recharge areas and the water quality of the groundwater has become more apparent in recent years. For instance, excessive application of lawn fertilizers, failing septic systems and use of road salts for de-icing can cause elevated nitrate and chloride concentrations in a groundwater supply. Where communities, such as those on Long Island, must rely on groundwater as their primary source of drinking water, this situation may create a health problem.

The challenge to Long Island communities is not only to protect the quality but also the quantity of their groundwater resources. In an effort to reduce the leaching of contaminants from failing cesspools and septic systems into the groundwater aquifer, several communities have installed public sewage treatment systems. Although this results in a net removal and treatment of pollutants, significant quantities of water which otherwise would have recharged the aquifer are instead treated and discharged into marine waters or their tributaries. This causes the volume of the freshwater aquifer to shrink, and the salt water intrusion from the surrounding sea to increase. A loss of potable groundwater results.

Stormwater recharge basins have been built throughout Long Island to retain this water and allow it to filter into the groundwater aquifer. But as the stormwater flows over roads, parking lots, industrial sites, and other areas, it picks up contaminants. Trace levels of toxic contaminants are now being detected in some of Long Island's groundwater aquifers, and it appears that treatment of the stormwater collected in the recharge basins may be necessary.

Solid Wastes

As water pollution efforts lead to higher levels of municipal and industrial wastewater treatment, greater volumes of residual sludges will result. Because of their physical and chemical properties, there are no easy solutions for the disposal of most sludges. Traditional methods have included land disposal either in landfills or by spreading on land, incineration, and ocean dumping. Land disposal poses problems with odors, runoff and leaching; incineration affects air quality conditions; and ocean dumping may have adverse effects upon water quality and aquatic life.

In New York State the most severe impacts from sludge disposal occur in the New York City metropolitan area. Open water dumping in the New York Bight has reduced fishery resources. The United States Environmental Protection Agency has mandated that dumping in the Bight be discontinued by 1981, but implementation is likely to be very difficult.

Solid wastes such as building rubble, manufacturing wastes and residue from incinerators also pose substantial hazards to water quality, especially in the New York metropolitan area where suitable onshore disposal sites are limited. Even where these sites are available, the toxicity of hazardous nature of some solid wastes necessitates very careful disposal and long-term monitoring of the disposal sites.

Water Quality Management Planning programs being carried out at both the state and regional levels under Section 201 and 208 of FWPCA (PL 92-500) are currently studying the available alternatives for environmentally sound sludge management and disposal, as well as the disposition of certain other residual wastes. In addition, the Clean Water Act of 1977 (PL 95-217) calls for EPA to conduct a special study on the utilization of treated municipal wastewater and sludge.

Thermal Discharges

Most of New York State's electric generating facilities and certain other industrial processes are located along its coastlines because of the availability of large volumes of water needed for cooling purposes. The production of electric power results in large amounts of waste heat. Water used as a coolant is then discharged into water bodies. This discharge of warmer water can create serious problems for the aquatic species and the quality of coastal water, especially if discharged intermittantly as is customary with the start up and shut down of generating facilities.

Thermal discharges in small embayments or semi-enclosured areas (such as estuaries) are likely to have more negative effects on fish than discharges in open waters. These enclosed areas have lower dilution capacities and lower rates of flushing and thus cannot easily dissipate thermal discharges. These areas, therefore, are less appropriate as locations for major steam electric generating facilities.

During winter months fish often congregate in the warmer waters created by discharged water. However, should a generating facility be shut down for a period of time, the sudden shift down in water temperature could cause thermal shock and subsequent death to large numbers of fish.

Also, warmer water contains less dissolved oxygen; needed by a water body to neutralize certain wastes. By discharging heated water into a water body, its capacity to assimilate waste is reduced.

Program Policies

11.1 MUNICIPAL, INDUSTRIAL AND COMMERCIAL DISCHARGE OF POLLUTANTS, INCLUDING, BUT NOT LIMITED TO, TOXIC SUBSTANCES AND HAZARDOUS SUBSTANCES, INTO COASTAL WATERS SHALL CONFORM TO STATE WATER QUALITY STANDARDS.

Municipal, industrial and commercial discharges include not only "end-of-the pipe" discharges but also plant site runoff, leaks, spillages, sludge and other waste disposal, and drainage from raw material storage sites. Also, the regulated industrial discharges are both those which directly empty into receiving coastal waters and those which pass through municipal treatment systems before reaching the state's waterways. New York's non-degradation policy is stated in Article 17-0101 of the Environmental Conservation Law as "to maintain reasonable standards of purity of the waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of fish and wildlife, including birds, mammals and other territorial and aquatic life, and the industrial development of the state, and to that end require the use of all known available and reasonably methods to prevent and control the pollution of the waters of the State of New York."

A. State Means for Implementing the Policy

1. State Pollutant Discharge Elimination System, Environmental Conservation Law (Article 17, Title 18)

The State operates this permit program for regulating point source discharge (including municipal, industrial and commercial discharges) of pollutants. The permits are renewed at least every five years and are subject to effluent limitations and standards, compliance schedules and required monitoring. As a result of a recent water quality management agreement between the State and the Region II Office of the Environmental Protection Agency (see citation below), the State will expand its list of toxic contaminants to be regulated through the State Pollutant Discharge Elimination System program.

2. Agreement on A Five Year Water Quality Management Program 1978

Under a recent agreement between Region II of the Environmental Protection Agency and the State, a joint effort will be applied to regulate 65 specific toxic substances. The Toxic Substance Control Act of 1976 authorizes the Environmental Protection Agency to inventory chemicals produced or used in the United States, to identify those substances considered toxic, and to develop tolerance limits for 65 priority toxic contaminants. All of these substances will require the application of "Best Available Technology Economically Achievable" (BATEA) in order to meet national effluent limitations by July 1, 1984. Meanwhile, New York is identifying the industrial firms in the State which are discharging these 65 priority pollutants.

As Best Available Technology Economically Achievable guidelines are promulgated by the Environmental Protection Agency, the state will enforce them through its discharge permit program. Also, once the Environmental Protection Agency has developed pretreatment standards for industrial discharges that pass through municipal systems, the State will develop a comprehensive pretreatment strategy.

3. Industrial Hazardous Waste Management, Environmental Conservation Law (Article 27, Title 9)

This program provides the State regulatory authority to control the transfer, storage, treatment and disposal of hazardous substances. Problems associated from leaks, spillages and drainage from storage sites can be addressed through this program. Since passage of this New York State Law in the 1978 session, the Department of Environmental Conservation has begun developing regulations consistent with those regulations described in the federal Resource Conservation and Recovery Act of 1976.

4. Substances Hazardous to the Environment (ECL, Article 37)

The identification of those hazardous substances which "because of their toxicity, magnification or concentration within biological food chains, present a demonstrated threat to biologic life cycles" and an inventory of the industrial and commercial use of these substances are tasks authorized by this law.

5. State Certification of Public Sewage Treatment Plant Operators, ECL (Article 3-0301) Public Health Law (Section 225)

In an effort to assure the proper operation of publicly owned sewage treatment facilities, the plant operators are required to meet established training and experience qualifications. Proper operation and maintenance of sewage treatment plants will result in more effective treatment of wastes before entering coastal waters.

11.2 STATE COASTAL MANAGEMENT POLICIES AND INFORMATION PERTAINING TO SPECIFIC LAND AND WATER USES SHALL BE CONSIDERED WHILE REVIEWING COASTAL WATER CLASSIFICATIONS AND WHILE MODIFYING WATER QUALITY STANDARDS; HOWEVER, THOSE WATERS ALREADY OVER-BURDENED WITH CONTAMINANTS SHALL BE RECOGNIZED AS BEING A DEVELOPMENT CONSTRAINT.

A. State Means for Implementing the Policy

1. Classification of Waters and Adoption of Standards Environmental Conservation Law (Article 17, Title 3)

The State has the authority to classify waters in accordance with considerations of best usage in the interest of the public and to adopt water quality standards for each class of waters. These classifications and standards are reviewable at least every three years for possible revision or amendment. Relevant information gathered through the Coastal Management Program and state coastal management policies shall be

factored into the review process for coastal waters.

The state has identified certain stream segments as being either "water quality limiting" or "effluent limiting." Waters not meeting State stream standards and which would not be expected to meet standards even after application "best practicable treatment" to effluent discharge are classified as "water quality limiting". Those segments meeting stream standards or are expected to meet stream standards after application of "best practicable treatment" are classified as "effluent limiting," all new waste discharges must receive "best practicalbe treatment." However, along stream segments classified as "water quality limiting," waste treatment beyond "best practicable treatment" would be required, and costs of applying such additional treatment may be prohibitive for new development.

11.3 ENCOURAGE THE USE OF ALTERNATIVE OR INNOVATIVE SANITARY WASTE SYSTEMS IN THOSE AREAS WHERE THE COST OF CONVENTIONAL FACILITIES ARE UNREASONABLY HIGH, GIVEN THE DEGREE OF PROTECTION THEY WOULD AFFORD; PRIORITY IN ENCOURAGING THE USE OF SUCH SYSTEMS SHALL BE ACCORDED TO THOSE AREAS WHERE SIGNIFICANT COASTAL RESOURCES WILL BE PROTECTED.

A. State Means for Implementing the Policy

1. Construction and Operation Grants, ECL, Article 17, Title 9)

The Clean Water Act of 1977 authorizes the states to exercise the option of setting aside up to 4% of its federal 201 construction grant allotment to aid small communities install small sanitary waste systems which are alternatives to the conventional waste treatment approach. Under certain conditions, a project may be eligible for a federal grant, of up to 85% of the capital costs. Alternative systems include individual septic tanks and other subsurface disposal systems, dual systems, small systems serving clusters of households or commercial users, and pressure or vacuum sewers. While individual year-round dwellings are eligible for financial assistance through this Program, vacation homes and cottages are not.

Although a private individual may initiate a request for financial assistance, this request must go through a local government, county or sewer distrcit which functions as the applicant. The applicant then applies for a 201 Step 1 grant to the Department of Environmental Conservation to conduct a feasibility study. The public body which submits the application is responsible for proper installation and maintenance of the treatment system once it is approved.

11.4 ALL PRACTICABLE EFFORTS SHALL BE UNDERTAKEN TO CONTROL STORM RUNOFF AND COMBINED SEWER OVERFLOWS; PRIORITY IN COASTAL WATERS FOR SUCH EFFORTS SHALL BE ACCORDED TO THOSE AREAS WHERE PROTECTION OF SIGNIFICANT COASTAL RESOURCES WILL BE PROTECTED.

A. State Means for Implementing the Policy

1. Agreement of A Five Year Water Quality Management Program

The State and the Environmental Protection Agency have agreed to address the problems of combined sewer overflows and urban storm runoff by investigating alternative solutions, developing best management practices, and identifying problem areas where improvements are most urgently needed.

2. State Water Quality Management Program

A statewide "208" Urban Runoff Study is being conducted to establish overall policy directions for urban runoff; it will also identify and map some urban runoff problem areas, and quantify their effects relative to other water pollution sources.

B. Local Means for Implementing the Policy

1. Local Government General Powers

Municipalities are empowered to provide and manage basic public services. These governments can assist in the implementation of this policy through increased street sweeping and reduced use of salt for de-icing of roads.

11.5 IN PROVIDING FUNDS TO APPLY BEST MANAGEMENT PRACTICES TO MITIGATE RURAL NON-POINT POLLUTION PROBLEMS, PRIORITY SHALL BE GIVEN TO THOSE CRITICAL AGRICULTURAL-RELATED WATER QUALITY PROBLEMS WHICH CAN BEST BE ELIMINATED OR REDUCED THROUGH SUCH PRACTICES. THE THREAT OF IMPACT ON SIGNIFICANT COASTAL RESOURCES WILL ALSO BE CONSIDERED.

A. State Means for Implementing the Policy

1. State Water Quality Management Program

Under the 208 subsection (j) of the Clean Water Act of 1977, the State will identify those areas where it can be demonstrated that application of the Best Management Practices can eliminate or retard the entrance of farming related pollutants into a stream. Priority areas identified by the State and then selected by the Environmental Protection Agency will be eligible for 50% federal cost-sharing assistance to implement Best Management Practices on farm. Eligibility for this rural landowner assistance program depends on: (1) documented evidence of a critical water quality problem resulting from rural, non-point pollution; (2) the problem area is addressed in the agricultural portion of the State's 208 plan; and, (3) the assurance of an adequate level of participation by rural landowners.

2. Farm Conservation Plans, Soil and Water Conservation District Law, (Section 9, Subdivision 7a)

This Law requires landowners to apply to the local Soil and Water Conservation District for preparation of farm conservation plans for farms of 25 acres or more. Such plans can recommend which management practices (e.g. corp rotations, tile drains, contouring and grassed waterways) be used to control soil erosion and reduce rural runoff of nutrients, perticides and sediment. These plans complement the rural landowner assistance program cited above, because they identify specific means of mitigating a particular rural non-point water quality problem.

11.6 DISCHARGE OF WASTE MATERIAL FROM VESSELS INTO COASTAL WATERS SHALL BE LIMITED SO AS TO PROTECT FISH AND SHELLFISH HABITATS, RECREATIONAL AREAS AND WATER SUPPLY AREAS.

A. State Means for Implementing the Policy

1. Disposal of Sewage and Litter in Waterways, Navigation Law (Section 33-c)

This law prohibits the discharge of sewage, garbage, rubbish, and other solid and liquid materials from all watercraft and marinas into the state's waters. Specific effluent standards for marine toilets have been promulgated by the Department of Environmental Conservation (6 NYCRR, Part 657). Priority will be given to the enforcement of this Law in the areas which need protection from contamination by vessel wastes (that is, shellfish beds, beaches and public water supply intakes).

B. Local Means for Implementing the Policy

Port development plans prepared by port authorities or local governments and recognized in the state's coastal management plan should include provisions of in-port vessel waste disposal facilities, particularly in areas where significant coastal resources are being threatened, e.g. shellfish beds on Long Island. Granting of a zoning or sanitary permit for constructing new or expanding existing marinas will be contingent on the provision of such facilities.

11.7 DREDGING AND OTHER EXCAVATION IN COASTAL WATERS SHALL BE UNDERTAKEN IN SUCH A MANNER SO AS TO MINIMIZE ADVERSE EFFECTS ON WATER QUALITY AND ON OTHER SIGNIFICANT COASTAL RESOURCES.

Dredging often proves to be essential for navigation, port development, flow control, beach nourishment, sand and gravel mining, pollutant removal and meeting other coastal management needs. Such dredging projects, however, may adversely affect water quality, fish and wildlife habitats, wetlands and other important coastal resources. These adverse effects can be minimized through careful design and timing of the dredging operation and proper selection of the dredge spoil disposal site. Dredging permits will be granted after it has been satisfactorily demonstrated that these anticipated adverse effects have been reduced to an acceptable level.

A. State Means for Implementing the Policy

1. Protection of Waters, ECL, (Article 15, Title 5)

Through a permit program, the Department of Environmental Conservation regulates dredge and fill activities in the state's navigable waters and in streams classified C(t) and above. Unreasonable erosion of soil, increased turbidity of waters, irregular variations in velocity, temperatures and water levels, loss of fish and aquatic wildlife habitat, and the endangerment of the public health, safety and welfare are factors taken into consideration in the granting of a dredging permit. This program applies to both fresh and marine waters.

2. Freshwater and Tidal Wetlands Acts (ECL, Articles 24 and 25)

Any form of dumping, filling or dredging activity proposed within the boundaries of tidal and freshwater wetlands is controlled through these two permit programs. These wetland resources and water quality in adjacent areas are therefore protected.

3. Clean Water Act (Section 404)

This federal Law allows the delegation of permitting authority to states to control dredge and fill activities in non-navigable waters. The state's program is subject to the guidelines promulgated by the Environmental Protection Agency (Section 404(b)(1)). It is possible under this Law for New York to regulate dredge and fill activities in those tributaries which have flows of less than five cubic feet per second.

4. Proposed State Coastal Management Act, Executive Law (Article 40)

To facilitate the process of designing a dredging project and selecting suitable disposal sites, the Coastal Management Board will make available any information gathered as part of its inventory (e.g. distribution of significant habitats, existing development patterns, recreational sites, etc.), a decision-making model for assessing the technical, economic, and environmental feasibility of a dredging project, and additional staff assistance.

11.8 SPILLS ASSOCIATED WITH THE SHIPMENT AND STORAGE OF PETROLEUM AND OTHER HAZARDOUS SUBSTANCES INTO COASTAL WATERS WILL BE MINIMIZED; ALL PRACTICABLE EFFORTS SHALL BE UNDERTAKEN TO EXPEDITE THE CLEANUP OF SUCH DISCHARGES; AND RESTITUTION FOR DAMAGES WILL BE REQUIRED WHEN THESE SPILLS OCCUR.

A. State Means for Implementing the Policy

1. Oil Spill Prevention, Control and Compensation, Navigation Law (Article 12)

This law empowers the state to license major facilities (refinery, storage or transfer terminal, pipeline, deep water port, drilling platform and vessels considered a

major facility only when petroleum is transferred between vessels) and require that evidence be provided for the control of spill and contamination cleanup. The firms responsible for such spills are obligated to remove the prohibited discharge. In the event the spiller does not fulfill this responsibility, the State will perform cleanup operations at the expense of the spiller. A spill cleanup fund based on fees charged to licensed facilities in New York will be used to supplement the U.S. Coast Guard's supervision responsibilities for cleanup activities in U.S. navigable waters.

2. Penalties and Liabilities for Spills of Bulk Liquids (ECL, 71-1941)

The State can fine the person or owner of bulk liquids of 1,000 gallons or more for spill and cleanup costs when such spills pollute state waters.

11.9 ALL PRACTICABLE EFFORTS SHALL BE UNDERTAKEN TO MINIMIZE THE DISCHARGE OF EXCESS NUTRIENTS INTO COASTAL WATERS FROM BOTH POINT AND NON-POINT DISCHARGE SOURCES.

A. State Means for Implementing the Policy

1. Phosphate Limits, Environmental Conservation Law (Article 35)

New York has established a statewide limitation on the use of phosphate detergents and other household cleaning products. By restricting the allowable concentrations of phosphates in detergents, discharges into surface and groundwaters via sewage treatment plants and septic tanks has been significantly reduced.

2. State Pollutant Discharge Elimination System Environmental Conservation Law (Article 17, Title 8)

The State is able to restrict municipal and industrial effluent discharges which contain high levels of phosphorus, nitrogen and other nutrients. It was through this program that New York was able to fulfill its part of an agreement with other Great Lakes states and the International Joint Commission to limit municipal discharge of phophorus compounds within the Great Lakes Basin.

3. Realty Subdivision Approval, ECL, (Article 17, Title 15)

Under this Law, the design of on-site sewage disposal plans for subdivisions of five or more lots must be reviewed and approved before the filing of such plans with the county. This review procedure ensures that proper treatment of sewerage will be provided and thus reduce discharge of nutrients into surface and groundwater.

4. Freshwater and Tidal Wetlands Act

Wetlands function as a natural "nutrient trap." The velocity of water flowing through a wetland area is reduced to a point where suspended soil particles, in which nutrients are absorbed fall out of suspension and become associated with the muck in the wetlands. These state laws protecting wetland areas from physical destruction assure the continued functioning of these living nutrient traps, thereby providing nutrient removal from the flowing surface waters prior to their entry into open waters.

B. Local Means for Implementing the Policy

Section 228 of the Public Health Law enables a municipality to adopt a sanitary code. This code must be consistent with the State sanitary code established by the public health council. This code may regulate the disposal of sewage and the design of sewage disposal systems (except sanitary or combined sewer systems) within the municipality. One of the major sources of nutrients are malfunctioning septic systems. An adopted and enforced sanitary code could prevent nutrients from leaching into coastal waters and ground water supplies.

11.10 ALL PRACTICABLE EFFORTS SHALL BE UNDERTAKEN TO INSURE THE PROTECTION OF THE QUANTITY AND QUALITY OF GROUNDWATERS, PARTICULARLY WHERE SUCH WATERS CONSTITUTE THE PRIMARY OR SOLE SOURCE OF WATER SUPPLY.

A. State Means for Implementing the Policy

1. Well Drilling Regulation in Long Island ECL (15-1525 and 15-1527

This law provides for state control of development of new or expansion of existing groundwater supplies in Long Island by licensing all well drillings and requiring that persons or public corporations proposing to develop groundwater supplies demonstrate that overuse or depletion of the supply will not result from the proposed project.

2. Realty Subdivision Approval, ECL (Article 17, Title 15)

The realty subdivision law as it applies in Nassau and Suffolk Counties ensures that adequate water supply, storm drainage and sanitary waste disposal systems in new developments be provided. Commercial properties in Suffolk County are also subject to these provisions.

3. Solid Waste Management Act, ECL (Article 27)

Through this law, owners of solid waste management facilities (including sanitary land fills) must demonstrate that leachate from the facility will not drain or discharge into groundwaters.

4. Phosphate Limits, ECL (Article 35)

The state's restrictions of the allowable concentrations of phosphates in detergents indirectly reduces the discharge of phosphorus into groundwaters via septic tanks.

B. Local Means for Implementing the Policy

1. Section 228 of Public Health Law authorizes a municipality to adopt and enforce a sanitary code to prevent excessive nutrients from leaching into groundwater supplies.

2. Adoption and enforcement of ordinances directed toward reducing animal wastes and domestic fertilizers prevents these substances from washing into storm sewers.

3. Adoption and enforcement of an ordinance regulating the sales of certain chemical cleaners used in on-lot disposal systems which have residual toxic by-products can also prevent contamination by these by-products.

C. Other Means for Implementing the Policy

1. Safe Drinking Water Act (33 USC 1265)

Since Long Island's groundwater supply has been designated a "primary source aquifer," all federally sponsored projects must be reviewed relative to their impacts on Long Island's groundwater aquifers.

11.11 THE DISPOSAL OF SOLID WASTES AND THE CONSTRUCTION AND OPERATION OF SOLID WASTE MANAGEMENT FACILITIES WITHIN COASTAL AREAS SHALL BE CONDUCTED IN SUCH A MANNER AS NOT TO RELEASE CONTAMINANTS INTO GROUND AND SURFACE WATERS.

The definitions of terms "solid wastes" and "solid wastes management facilties are taken from New York's Solid Waste Management Act (ECL, Article 27). For example, solid wastes include sludges from air or water pollution control facilities, demolition and construction debris and industrial and commercial wastes. Examples of solid waste management facilities include resource recovery facilities, sanitary landfills and solid waste reduction facilities. Although a funamental problem associated with the disposal and treatment of solid wastes is the contamination of water resources, other related problems may include: filling of wetlands and littoral areas, atmospheric loading, and degradation of scenic resources.

A. State Means for Implementing the Policy

1. Solid Waste Management Act, ECL, (Article 27)

Rules and regulations (6 NYCRR, Part 360) associated with the Solid Waste Management Act require that all owners of solid waste management facilities must either receive a valid construction permit or operation permit from the Department of Environmental Conservation. Before the Department will issue a construction or operations permit, it must be shown that

solid waste will not be deposited in or allowed to enter surface and groundwaters. It must also be shown that leachate from a solid waste management facility will not drain or discharge into surface waters. When these facilities are sited in coastal areas of the state, the Coastal Management Board will ensure that these facilities are appropriately located and designed in order to reduce water quality problems caused by solid waste disposal.

2. Registration of Septic Tank Cleaners, ECL (Article 27, Title 3)

Any person who removes or disposes of solid wastes from domestic sewer systems, treatment facilities, or from waste-producing operations of factories or commercial establishments must obtain a certificate of registration from the Department of Environmental Conservation. In the application for such a certificate, the applicant must specify the method and location of waste disposal.

3. Industrial Hazardous Waste Management Act of 1978, ECL (Article 27, Title 9)

The Industrial Hazardous Waste Management Act will provide an effective regulatory authority to control the transfer, storage and disposal of hazardous substances. The Act requires the identification and listing of hazardous wastes followed by the promulgation of regulations establishing a manifest system to monitor the transportation, storage and disposal of hazardous waste. Such system is to conform with provisions under the Resource Conservation Recovery Act of 1976. A permit to store, treat or dispose of hazardous wastes will be required. A certificate of registration to transport will also be required. The Act also specifies the establishment of criteria for siting industrial hazardous waste treatment, storage and disposal facilities. Following approval of such criteria a certificate of environmental safety and public necessity will be required. Since passage of this New York State Bill in 1978 session, the Department of Environmental Conservation has initiated the development of regulations based upon U.S. Environmental Protection Agency regulations as described in the Resource Conservation and Recovery Act of 1976.

4. Freshwater and Tidal Wetlands Act, ECL (Articles 24 and 25)

Both the Freshwater and Tidal Wetlands Laws are effective devices for the regulation of the disposal of solid wastes. Under rule and regulations covering the Tidal and Freshwater Wetlands Acts (draft form for freshwater wetlands), categories of uses subject to permit requirements of the respective acts are identified. Incompatible uses and presumtively incompatible uses are subject to the permit process. Disposal of dredged material, toxic material, or any other solid waste as defined by Section 27 of the ECL (Solid Waste Management Act), and filling of wetlands are defined as either presumptively incompatible or incompatible uses. Permits to conduct presumtively incompatible uses are difficult, if not impossible to receive.

5. Protection of Waters Law, ECL (Article 15, Title 5)

Under this statute, any filling of the State's navigable waters or streams classified C(t) and higher is subject to a permit program adminsitered by the Department of Environmental Conservation. The permit program also covers "marshes, estuaries, tidal marshes, and wetlands that are adjacent to and contiguous of any point to navigable waters." Before the Department of Environmental Conservation can grant a permit, it must determine the effect of the filling activity on the health, safety, and welfare of the people of the State and the natural resources of the State.

11.12 EFFLUENT DISCHARGED FROM MAJOR STEAM ELECTRIC GENERATING AND INDUSTRIAL FACILITIES INTO COASTAL WATERS SHALL NOT BE UNDULY INJURIOUS TO FISH AND WILDLIFE AND SHALL CONFORM TO STATE WATER QUALITY STANDARDS.

A. State Means for Implementing the Policy

1. Siting of Major Steam Electric Generation Facilities, Public Service Law, (Article VIII)

Before any steam electric generating facility can be constructed in New York, application must be made to the State Board on Electric Generation Siting and the Environment. The Board must issue a certificate of environmental compatibility and public need before construction can begin. Many factors are taken into account before the Board reaches its decision. One of these factors is that the facility "not discharge any effluent that will be unduly injurious to the propagation and protection of fish and wildlife, the industrial development of the State, the public health, and public enjoyment of the receiving waters." The effects of thermal discharges on water quality and aquatic organisms will be considered by the siting board when evaluating an applicant's request to construct a new steam electric generating facility.

2. Thermal Discharge Regulation, ECL (Article 17, Title 3, 6 NYCRR, Part 704)

The Department of Environmental Conservation is authorized to establish and enforce standards for thermal discharges into state waters.

Conclusion

The previous parts of this Section demonstrate that New York does, in fact, have many existing policies that address coastal management concerns as well as the authorities to carry out the policies. Based upon the analyses of the issues confronting the state's coastal area, only two concerns are singled out for new legislation; the regulation of development within identified critical erosion areas and the provision of locational priority to uses which require a waterfront location. The former would be applicable to areas along the coast where critical erosion hazards exist. The latter would apply primarily to coastal cities where competition for space along the shoreline is greatest. The remaining but equally important, coastal concerns can be addressed by current state regulatory, capital construction and financial assistance programs. The achievement of one or more of the coastal policies will often require the application of two or more state programs. The application of these programs will be in accordance with all appropriate coastal policies as well as their individual purposes. Thus, the Coastal Management policies provide a collective statement as to what and how coastal uses, activities and resources will be managed within the coastal area. These policies provide a framework that will guide and assess future management decisions.

As noted previously, federal and state actions which are consistent with the coastal policies will perform a significant role in the implementation of this management program. State agencies will be required to operate their programs in a manner that is consistent with all of the stated policies. Federal agencies, however, are required to ensure that their actions are consistent only with those policies that are enforceable by the State. As indicated above, many of the policies can be enforced by New York State, but the following have been determined not to be of an enforceable nature for the purposes of federal consistency: Policies 1.1, 4.3, 4.4, 7.4, 8.2, 8.3 and 8.6.

V.
Program Management

SECTION V

PROGRAM MANAGEMENT

Introduction

The previous section on coastal policies and implementation measures described what the Coastal Management Program is designed to achieve with respect to New York's position on concerns related to the eleven issue areas. It also indicated how each of those positions - or policies - can be achieved, in whole or in part, be existing state programs or proposed legislation. Section IV did not, however, describe how the Coastal Management Program as a whole would be organized, managed or administered. This Section discusses these topics.

There are several federal program requirements which address the organizational, managerial and administrative aspects of a state's coastal management program. Of these, two focus upon how a program is to be operated. They are as follows:

> "...States must describe the organizational structure that will be used to implement and administer the management program. This description must include a discussion of those state and other agencies, including local governments, that will have responsibility for administering, enforcing and/or monitoring those authorities or techniques required..." (Section 923.45)

and

> "...The Governor must designate a single state agency to receive and administer section 306 grants. This state agency shall be fiscally and programmatically responsible for the grants..." (Section 923.46)

Other requirements which affect the administration of New York's Coastal Management Program such as the means to resolve conflicts among agencies or competing uses, consideration of national interest, federal and state consistency procedures, and coordination with state, regional, county and local programs are either discussed in this Section or in Section VI.

The basis for the discussion on the organizational, managerial and administrative aspects of this Program is the proposed Coastal Management Act. This legislation is found in Appendix B.

State Coastal Management Agency

It is recommended that a Coastal Management Board be created within the Department of State and be officially designated as the agency responsible for the administration and implementation of the State Coastal Management Program. In the proposed Coastal Management Act presented in Appendix B, the Board is charged with the overall responsibility for carrying out the purposes and policies contained in the legislation.

The Board is to consist of three members who are to be appointed by the Governor with the advice and consent of the Senate. The persons appointed are to be representative of the general public. Each Board member will serve a term of four years, but no term is to extend beyond that of the Governor who appointed such member. The Governor also designates the Board's chairperson. The Board is to select an executive director who will be its chief administrative officer.

Other existing and proposed state agencies were considered as possible lead agencies for the Coastal Management Program. Several alternatives were described in the document entitled "A Discussion of Alternatives for New York's Coastal Management Program" which was distributed prior to public meetings held in June-July, 1978. These as well as other lead agency alternatives are discussed in Section X of this report.

Reasons for Recommendation

There are several reasons for designating the Coastal Management Board as the state's "306" Agency:

1. The Board, although created within the Department of State, would operate as an independent entity with a single purpose. As such, it will be able to concentrate its efforts and orientation on the management of coastal resources and activities, without bias toward particular interests which the Coastal Management Program seeks to balance.

2. The public will be provided with an active voice in the Program's decision making process, since the members of the Board are to be "representative of the public".

3. Although it will operate as a separate unit, the Board's location in the Department of State will provide continuity in the Program, since the Coastal Management Program was prepared by this agency.

4. Thus located, the Board can best coordinate its activities with the Department's statutory responsibilities in other areas requiring a comprehensive and balanced view point of resource protection, development and planning at the state level (i.e. statewide land use planning, preservation of agricultural lands and siting of utility transmission facilities). The Department's responsibility relating to local government, particularly in the technical areas of land use planning and regulation can also be utilized to enhance the Program. Such an approach is advocated by the federal Coastal Zone Management Act.

Functions of the 306 Agency

As the agency responsible for administering and implementing the State's Coastal Management Program, the Coastal Management Board will perform several types of actions or functions:

1. The Board, as the State 306 Agency, will accept and administer grants pursuant to Section 306 of the Coastal Zone Management Act. It may also distribute these funds to other state and local agencies which have roles in the implementation of the Program.

2. The Board will monitor and evaluate those coastal resources

management activities, performed by various state and local agencies, that are part of this Program. This will entail a substantive review of how well these agencies conduct their implementation activities with respect to the purposes and policies of the Coastal Management Program.

3. The Board will consider and recommend amendments to the State's Coastal Management Program for approval by the Governor and the Office of Coastal Zone Management. Specific procedures applicable to program amendments are presented in Section VIII of this report.

4. The Board will be the state agency to which local coastal management programs will be submitted for review and approval as to their consistency with the State Coastal Management Program. When certain aspects of local program approval are under the jurisdiction of other state agencies, the Board will be responsible to contact and seek approval from these agencies.

5. The Board will consult and coordinate with other state agencies and with county and local governments relative to their participation in specific aspects in the implementation phase of this Program.

6. The Board will also be the central state agency responsible for matters relative to federal consistency. Essentially, this includes the review of federal agency actions and determination as to whether or not such actions are consistent with the State Coastal Management Program. Specific procedures pertaining to federal consistency are presented in Secton VI of this report.

7. The Board will mediate resource use conflicts, promoting conformance with coastal management policies between state agencies and between state agencies and local governments. Where a solution that is satisfactory to the involved state agencies cannot be reached, the Governor may resolve the conflict.

Program Organization

How will the Coastal Management Board administer and implement New York's Coastal Management Program? This question is answered in a general way in Section I, where it is indicated that the State's Program will: 1) utilize existing state agencies' programs to achieve its objectives (thereby minimizing the need for new legislative authorizations), and 2) reflect the concerns and provide for the active participation of local governments. Both of these positions were well received at the statewide public meetings held in June and July, 1978.

These two positions are the basis for the organizational structure established by the proposed Coastal Management Act (see Appendix B). Because the Board will rely upon other state agencies to carry out many of the policies contained in the Program, the proposed organization must ensure that such state actions are conducted in a manner which is consistent with the Coastal Management Program. Similarly, because municipalities will be provided a role in the implementation of the Program's objectives, the recommended organization must indicate the method of local government participation, the responsiblities associated with the manage-

ment of local programs, and the relationships between the Board and the participating municipalities. In addition, the organizational structure must also provide for the possible involvement of regional and county agencies in terms of assisting the Board and local governments in the administration or implementation of the Program.

State Agencies' Responsibilities

New York's Coastal Management Program will utilize the many regulatory, financial assistance and capital construction activities of various state agencies to achieve the policies stated in Section IV of this report. The state agencies primarily affected by this Program include:

1. Department of Environmental Conservation
2. Department of Transportation
3. Department of Public Service
4. Office of Parks and Recreation
5. State Energy Office
6. Department of Commerce
7. Office of General Services
8. Department of Agriculture and Markets

This type of organizational arrangement is permitted by federal regulations, provided that the agencies coordinate and carry out their programs in a manner that is consistent with the state's coastal management policies. The agencies, however, must be legally bound to exercise their authority in conformance with a state's coastal management program policies.

Consistency and Coordination of State Agency Actions

The proposed Coastal Management Act (see Appendix B) fulfills these coordination and consistency requirements. In Section 909 of this proposed legislation, all state agencies are charged to manage, administer and coordinate their regulatory, financial assistance and capital construction programs affecting land use and development as well as their planning activities within the coastal areas of the State in accordance with the policies of the Coastal Management Program.

The Board is required to identify the specific programs of each state agency which, in its determination, have an effect on land use and development activities in New York's coastal areas and which can ensure the achievement of the coastal management policies. The Board is also required to notify each state agency as to what programs have been so identified.

Each state agency will have the opportunity to review and comment on the Board's determinations. If there is disagreement over the programs identified, the Board and the effected state agency are required to resolve any differences. In the event that the matter is not resolved, the Board will make a final determination and submit it to the Governor. The Governor may override or modify the Board's determination.

The proposed legislation requires state agencies to conduct the identified programs in a manner which is consistent with the policies contained in the Coastal Management Program. This required consistency will be achieved through a strong coordinative effort. To achieve this necessary coordination, the legislation requires the Board to enter into "memoranda of understanding" with those state agencies responsible for programs which affect coastal areas.

Essentially, the memoranda of understanding will establish the procedures by which the consistency of state agencies' actions will be ensured. To the greatest extent practical, current notification and review processes will be used for this purpose, if these systems provide the Board with sufficient information and time to conduct an adequate evaluation of an agency's proposed action.

Some of the existing coordination mechanisms which will be utilized to the greatest extent practicable are:

1. Circular A-95, Project Notification and Review System
2. State Environmental Quality Review Act
3. Department of State's review of state agency functional plans for the environment, transportation and recreation
4. Department of State's review and approval for Agricultural Districts
5. Transportation Project Development Process

If these and other processes do not adequately provide for an evaluation of consistency, the memorandum of understanding will incorporate a procedure that offers the Board the opportunity to review an agency's proposed actions.

The Board may provide in the memorandum of understanding that either it or the state agency having jurisdiction over a proposed action be responsible for determining whether or not such action is consistent with the policies in the Coastal Management Program.

Under the former arrangement, the affected state agency will be responsible for notifying and submitting a detailed description of the proposed action to the Coastal Management Board. The action will be reviewed by the Board for its consistency with the Coastal Management Program. During this period, the Board would consult with the affected state agency, if additional information or clarification of the proposal action is necessary. Regional, county and local agencies will be consulted during this period as to the consistency of the proposed action with approved local programs. If deemed appropriate, the Board may require a public hearing on the proposed action. At the end of the review period, the Board will advise the state agency of its determination. If the action is determined to be inconsistent with the Coastal Management Program, an order will be issued to the agency directing it not to approve or undertake the action. The Board will also foward this final determination to the Governor, who may either override or modify its decision.

Under the latter arrangement, the state agency having jurisdiction over a proposed action will be responsible for ensuring that such action is consistent with the Coastal Management Program. The agency, however, must give notification of the proposed action to the Board. In addition, the Board must have the opportunity to provide information to and consult with the state agency as to the consistency of the proposed action with the Coastal Management Program before a final decision is reached.

The above process is described in detail in Section 909 of the proposed Coastal Management Act (see Appendix B). This Section also states that this consistency review process cannot result in an override of any permit, license, certification, construction, grant, loan or other proposed action which has been denied or conditioned by the state agency having jurisdiction over such action.

Technical and Financial Assistance

Under the proposed Coastal Management Act, the Board is authorized to provide technical assistance to municipalities for the preparation of local coastal management programs. The Board may provide such assistance directly or through regional, county and other state agencies which may have the desired technical expertise or jurisdictional responsibility.

The Board is also authorized to offer financial assistance to communities for the purpose of preparing local coastal management programs. Although the emphasis of the proposed legislation is upon the preparation of such programs by local governments; state, regional and county agencies are eligible to receive funding for assisting communities in the development of their local management programs. Any funding for the preparation of local programs will be limited to one twelve month period. But, funds may be provided for an additional one-year period, if the Board determines that the extent of the locality's coastal area and its associated problems warrant more time for the preparation of the local program. Financial assistance for the implementation of local coastal management programs will be tied to the continued approvability and the scope (extent and types of activities) of such programs.

Role of Local Government

The 240 cities, towns and villages along New York's coastlines are expected to play an important role in the administration and implementation of the State Coastal Management Program. Their participation in the Program will assist the State in its efforts to manage coastal resources. Their involvement will provide further enforceability to the State Coastal Management Program, since local governments possess a broad range of powers that can be applied to land use and development activities that occur within their respective waterfront areas. In Section IV of this report, some to these regulatory and other powers were identified as possible local means of implementing specific program policies.

Active involvement in the Program will also privide a municipality the opportunity to develop local coastal policies which are in accord with the state's, but they may be more specific as to how or where a particular objective is to be accomplished. For example, a locality may went to preserve the remaining prime farmlands situated within its coastal area, but in one location exclusive agricultural use zoning regulations may be the best method to employ, while in another large lot residential use restrictions may be more practical. Another example is that of water dependent uses, where the proposed legislation on this subject permits the municipality to identify such uses and the area within which they are to be located. Through their participation in the Program, local governments would be assured that state agency actions as well as many federal agency actions would be consistent with their coastal policies.

Local Coastal Management Programs

The proposed legislation permits local governments to voluntarily participate in the State Coastal Management Program. Once a municipality decides to be involved in the Program, it must prepare a management program for its portion of the delineated coastal area. This program would then be submitted to the Board for its review and approval. To receive approval by the Board, a community's coastal management program must fulfill several criteria:

1. It must apply to the entire coastal area within the municipality.

2. It must further and support the State Coastal Management Program policies and apply them to local land use and development activity within the coastal area.

3. It must identify all of the authorities and provisions necessary for its implementation.

4. It must demonstrate that the locality has the capability for its administration and enforcement.

5. It must provide the Board with adequate notification of proposed local actions relative to land use and development within the coastal area.

Continued Conformance to State Programs

Once a local coastal management program has been approved by the Board there is need to ensure that this local program is administered and enforced in a manner that is in conformance with the State Program. The proposed Coastal Management Act provides several means of accomplishing this conformity.

The Board is required to review an approved local coastal management program one year after its approval and at least once every two years thereafter. The purpose of such a review is to determine if the local government is adequately implementing its program.

The Coastal Management Board may also appeal to the appropriate local governmental board the decision of an administrative official who is charged with the enforcement of the local program. It may also insititue a legal proceeding under Article 78 of the Civil Practice Law and Rules against any local decision that is made relative to the implementation of a local coastal management program, if such a decision does not conform with the approved local coastal management program.

Finally, the Board may revoke its approval of a local coastal management program if it determines that the local government has failed to administer and implement is program in conformance with the State Program. In such instances, a public hearing will be held in the affected municipality before any decision is made on the matter. The Baord may reinstate its approval of a local program provided the municipality gives satisfactory assurance that the program will be properly administered and enforced.

Role of Regional and County Agencies

The proposed Coastal Management Act recognizes that both the Board and local governments may need assistance in the preparation, administration or implementation of their respective coastal management programs. The extent and diversity of New York's coastlines and the coastal communities' varying resource management capabilities make it imperative that the State Program be sufficiently flexible to permit the utilization of existing areawide agencies to assist the Board or local governments, when necessary.

The legislation allows the Coastal Management Board to enter into agreements with county or regional agencies to:

1. Assist the Board in its review of the implementation of local coastal management programs.

2. Provide technical assistance to municipal governments in the preparation of their local coastal management programs.

In the latter, situation, the agreements between the Board and a county or regional agency will be based upon the desires of the affected local government, the capability of the agency to perform the necessary technical services and the existence of issues which require areawide considerations. In each of the above stated situations, the Board may provide funding to these agencies for the services that they provide.

VI.

• National Interest • Uses of Regional Benefit • Federal Consistency

SECTION VI

NATIONAL INTEREST . USES OF REGIONAL BENEFIT . FEDERAL CONSISTENCY

Introduction

Three federal program requirements warrant special discussion due to their particular subject matter and their role in a state's coastal management program. They are the requirements pertaining to national interest, uses of regional benefit and federal consistency.

In the development of its program, a state must demonstrate that adequate consideration has been given to various types of facilities which may locate in coastal areas and are of interstate or national concern. In addition, the state's management program must ensure that consideration of such facilities will be continued throughout its implementation phases.

There are some types of land uses and facilities which are of benefit to several coastal communities, or for that matter, an entire region. Some of these uses of regional benefit are subject to local government regulations which could prevent their siting in coastal areas. A state's management program must identify and demonstrate how such uses would not be unreasonably restricted or excluded. It should be noted that these uses and facilities may be considered of national interest.

A state's coastal management program must contain the procedures by which it will implement the federal consistency requirement contained in the Coastal Zone Management Act of 1972. As indicated in Section IV of the report, these procedures will enable New York State to achieve some of its coastal policies. These policies have, in many cases, taken into account national considerations.

National Interest

New York State's Coastal Management Program must provide for "... adequate consideration of the national interest involved in planning for, and in the siting of, facilities ...which are necessary to meet requirements which are other than local in nature." (Section 306(c)(8) of the Coastal Zone Management Act)

Collectively, local and state coastal resource management actions can have national implications. Therefore, it is imperative that such managerial actions be taken only after their broader implications are considered. Related to this overall concern is the matter of requiring consideration of the national interest in certain facilities so as to facilitate the implementation of federal consistency provisions. Since the activities and programs of federal agencies are to be consistent with a state's coastal management program, it is only logical that a state be required to consider, during the development of its program, the policies and objectives of the various federal activities and programs.

New York's Coastal Management Program has attempted to meet the above requirements. This Program identifies the facilities which are considered by New York State to be in the national interest, and for each the following information is provided:

1. The sources used a summary statement or quote which conveys what the state Program perceives to be the relevant national interest.

2. An indication as to how the national interest was considered in the development of the Program policies.

3. The identification of the conflicts that may arise between one national interest and various other local, state and national interests.

4. The processes to be used in New York to resolve such conflicts and to ensure that the national interest in a facility is considered throughout the implementation phases of the Program.

National Defense Facilities

Through direct communications with the various branches of the U.S. Department of Defense and analyses of the policy papers issued by its agencies, New York's Program has determined that areas of military concern include: (1) the accurate identification of all lands owned or leased by the military; (2) the protection of military installations from incompatible adjacent uses; (3) the maintenance of transportation facilities within coastal areas at levels that would ensure optimum military mobility; and, (4) the need to provide new or expand existing military facilities.

The Department of Defense holdings, because they are federally-owned lands, are excluded from the purview of the state Program (a list of all excluded lands is found in Appendix "C"). Interaction between the Department of Defense and the state Program will be significant, but at present military facilities located within New York's coastal areas are not substantial in size or number.

The Program recognizes the importance of a strong national defense and the economic and historical (and in the case of facilities such as West Point, the cultural and educational) contributions made by military installations throughout the coastal areas. In recognition of the above, the state Program does not contain any policy that could be expected to interfere with the provision or the operation of military facilities in coastal areas.

No irreconcilable conflicts between the Department of Defense and other coastal interests are presently foreseen. However, there are some issues which may become significant in the future:

1. Increased public access to recreational sites adjacent to military holdings might pose a security threat or otherwise inhibit military operations.

2. The siting of a defense facility on land which is not suitable for such development and would have adverse effects upon coastal resources.

3. The reduction in size or closing of an installation might cause a hardship upon a local economy.

4. On-site or off-site transportation improvements necessary for the operation of a military installation, for example, dredging of a navigation channel widening of a road, expansion of an airport, may be counter to the state Program policies.

New York's Coastal Management Program will seek to prevent serious conflicts between the Department of Defense and other parties with coastal

interests by using: (1) the Project Review and Notification System (A-95 Process), through which both the State and the Department can review and comment on proposed projects and programs that might have an effect on military operations; and, (2) the federal consistency mediation process to be instiatued by the Secretary of Commerce in the event that serious differences arise between the State Program and the Department's activities and programs.

Energy Facilities

The National Energy Plan was the primary source for determining the national interest in energy facilities. Direct communications with the following federal agencies served as supplementary sources:

- Department of Energy
- Federal Energy Administration
- Bureau of Land Management
- Maritime Administration
- Geological Survey
- Department of Transportation
- Army Corps of Engineers
- Nuclear Regulatory Commission

The National Energy Plan sets forth three overriding objectives for the United States: (1) to reduce dependence on foreign oil and vulnerability to supply interruptions; (2) to keep the nation's imports sufficiently low to weather the period when oil production appraoches its capacity limitation; and, (3) to have renewable and essentially inexhaustible sources of energy for sustained economic growth.

The salient features of the National Energy Plan are: conservation and fuel efficiency; national pricing and production policies; reasonable certainty and stability in government policies; substitution of abundant energy resources for those in short supply; and, development of non-conventional technologies for the future.

1. Energy Conservation

New York's adopted Land Use Element and the Transportation Master Plan call for the conservation of energy resources through public transportation improvements and concentration of development in existing urban locations. The state Coastal Management Program is in basic agreement with these adopted plans, for some of its policies encourage economic expansion in the state's existing major port areas and manufacturing centers, while others direct development away from environmentally sensitive locations. These policies serve, in the aggregate, to encourage concentrated development, thereby fostering reduced energy consumption.

The Coastal Management Board will use the A-95 Process, where appropriate to evaluate projects within the coastal areas which might have an imact on energy use. If the national interest in energy conservation has not been adequately considered by the party proposing the project, comments to that effect will be submitted. If necessary, a meeting will be held to confer directly with that party.

The State Environmental Quality Review process requires that the environmental impact statement prepared for a proposed action consider the

action's probable impact on the use and conservation of energy resources. In its review of such statements, the Board if adequate consideration has been given to energy conservation requirements. When consideration has not been properly given, the Board will forward comments to that effect to the lead agency.

As indicated in Section IV, the State Energy Office is required to develop and adopt a statewide energy master plan. This plan will incorporate the national interest in energy conservation, for it must consider: the factors which affect energy consumption, such as economic and development trends, urban development patterns and building designs. Also, the extent to which conservation measures and new technologies may affect energy requirements must be taken into account.

2. Liquified Natural Gas (LNG) Facilities

"Due to its extremely high costs and safety problems, LNG is not a long-term secure substitute for domestic natural gas. It can, however, be an important supply option through the mid-1980s and beyond, until additional gas supplies become available."[1]

As indicated in the discussion on the state's energy facility planning process presented in Section IV of this report, LNG facilities are already situated within New York's coastal areas. This Program's policies reflect the national interest as to the role that these facilities can perform in meeting future energy needs. The possibility of siting and operating LNG facilities in the populous sections of New York's coast does raise, however, other significant national concerns; public safety and protection of the quality of our environment. The policies contained in the Program stress the importance of these additional concerns as well as the national interest in LNG facilities.

Adequate consideration of the need for LNG facilities in New York's coastal area will be provided through the state's energy master plan. Biennially, the New York gas group must submit to the State Energy Office a long-range system plan which contains, among other items, the identification of existing and future gas storage facilities. This plan will be reviewed by the Coastal Management Board. If the Board finds that adequate consideration has not been given to LNG facilities, it will present a written statement citing this deficiency in the plan to the State Energy Office.

Consideration of the national interest in such facilities is also provided on a project basis. LNG project proposals are subject to review under the State Environmental Quality Review and the certificate of environmental safety (ECL, Article 23, Title 17) processes. When the Board evaluates such project proposals for their consistency with Program policies, it will also provide comments to the appropriate agency relative to the national interest in Liquified Natural Gas facilities.

1 National Energy Plan, p. 57

3. Steam Electric Generating Facilities

"During the remainder of this century, ... it (the U.S.) will have to rely for the bulk of its energy supply on the conventional sources now at hand: oil, natural gas, coal, nuclear, and hydro-electric power. Federal policy should stimulate the expanded use of coal, supplemented by nuclear power and renewable resources, to fill the growing gap created by rising energy demand and relatively stable production of oil and gas."[2]

To balance the need for increased energy supplies and the need to protect the environemnt, the State of New York enacted Article VIII of the Public Service Law which established a process for assessing the suitability of sites proposed as locations for major steam electric generating facilities. The Coastal Management Program incorporates the above basic policy and endorses the site evaluation procedure.

The siting process is designed as a comprehensive one. First, the siting board is broad-based, consisting of the Chairman of the Public Service Commission, the Commissioners of Environmental Conservation, Energy Office and Commerce, and an ad hoc member appointed by the Governor. Second, the applicant is required to report on all anticipated economic and environmental implications of the project. Third, the process provides individuals, interest groups, local governments and other parties the opportunity to be heard.

The Article VIII process provides the opportunity for the consideration of the national interest in the siting of these generating facilities. To ensure that such considerations are, in fact, taken, the Board will be a "party to a certification proceeding" for all major steam electric generating facilities that are proposed to be located in the State's coastal areas. At such proceedings the Board will present oral or written statements, if it is determined that the national interest has not been adequately considered. A proposed facility must also be consistent with the long-range planning objectives for electric power supply in the State. These objectives which are part of the State's energy master plan do take into account the Nation's concern over energy consumption and conservation.

4. Gas and Electric Transmission Facilities

With major electric generation and gas storage facilities located or likely to be sited within New York coastal boundaries, transmission lines are necessary to carry both forms of energy to their respective distribution systems. In some instances. these transmission lines are necessary to bring electric power or gas to the populated sections of the coast from sources outside the coastal boundaries and sometimes outside the State. Thus, there is a national interest in the siting of gas and electric transmission facilities in New York's coastal areas.

2 National Energy Plan, p. 57

The Coastal Management Program incorporates the policy contained in Article VII of the Public Service Law which states that such transmission facilities must be sited in a manner that is compatible with the environment and be in the "public need." The comprehensive review process established by this Article provides the means for the consideration of the national interest in these facilities. The Board will petition to become a party to the review proceedings, thus it will present written or oral testimony to ensure that the national interest is adequately considered.

5. Outer Continental Shelf (OCS)

"Oil and gas under federal ownership on the Outer Continental Shelf are important national assets. It is essential that they be developed in an orderly manner, consistent with national energy and environmental policies."[3]

New York's coastal policies generally encourage the development and production of Outer Continental Shelf resources in order to obtain maximum economic benefits for the State and its localities. The policies also require that these activities be conducted in a manner which will not have adverse effects upon the state's coastal resources. The Program supports local efforts to attract specific types of on-shore facilities which are essential to the Outer Continental Shelf development and production activities. Waterfront locations for such facilities have already been identified in New York City and Long Island.

Recent passage of the Outer Continental Shelf Act Amendments provide for substantial state involvement in production and development activities. Through this law, the State will monitor these activities to ensure that both environmental and economic concerns are adequately addressed. In addition, federal consistency provisions will be utilized, where appropriate. Both provide a forum through which conflicting interests may be discussed and resolved.

Transportation Facilities

In determining the national interest in transportation, the following documents and federal agencies were consulted:

- Department of Transportation Act (49 US 1651, et. seq.)
- Railway Safety Act of 1970 (45 USC 421)
- Coast Guard, Primary Duties (14 USC 2)
- Department of Transportation
- Maritime Administration
- Interstate Commerce Commission
- US Army Corps of Engineers

3 National Energy Plan, p. 56

From these sources it was determined that the national interest in transportation is: (1) to develop a balanced national transporation system including well-integrated suface, air, water, and subsurface modes; and, (2) to provide fast, safe, efficient and convenient access via one or more modes of transporation for the movement of people, goods and services to, from, and through coastal regions.

The Coastal Management Program considers major ports, navigation channels, interstate highways, railroads, airports and their ancillary facilities to be in the national interest. For all such facilities, the Program supports the State Department of Transportation policies. These policies, as presented in the Department's Transportation Master Plan, are clearly supportive of national transportation concerns.

There are several conflicts that may arise in the pursuit of the national transportation interests. First, noise around airports is a source of friction between air service interests and those who reside near such facilities. This issue has particular relevance to the state Program because many of New York's major airports are near or within the coastal areas. Second, access to the shorefront is inhibited throughout the State by rail lines and interstate highways. Third, expansion of existing port facilities has met with opposition from recreation interests. Finally, the dredging of channels for navigation purposes will disturb river bottoms which may have adverse effects on water quality.

The state Program will continue to give adequate consideration to the national interest in maintaining an extensive, efficient and diverse transportation system. Simultaneously, the Program will also take into account the fact that the development of transportation facilities at inappropriate locations can interfere with the attainment of other national interests.

To ensure that all relevant interests are fairly represented, the Board will rely upon its review of environmental impact statements (required by SEQRA) and A-95 notifications as well as consistency provisions applicable to both state and federal agencies.

Recreation Facilities

The folowing documents, legislation and federal agencies were consulted in order to determine the national interests in recreational facilities:

- Nationwide Outdoor Recreation Plan
- Historic Preservation Act - P.L. 89-665
- Land Water Conservation Fund Act
- State Comprehensive Recreation Plan (SCRP)
- Heritage Conservation and Recreation Service
- National Parks Service
- Gateway National Park Plan

From the above sources, it was determined that the major objectives of the national interest in recreation are: (1) to consider recreation as an equal among other uses competing for space along coastlines; (2) to provide high

quality recreational opportunities to all people while protecting the coastal environment; (3) to increase public recreation in high density areas; (4) to protect existing recreation areas from adverse contiguous uses; (5) to improve coordination and management of recreation areas; and, (6) to accelerate the no-cost transfer of surplus federal property over to recreational uses.

New York State's Program recognizes the multiple values of recreation facilities in terms of their contribution to the economy, their role in achieving more desirable land development patterns, and their immeasurable effect upon people's health and spirit.

In recognition of these values, New York's Coastal Management Program supports the national interests in terms of increasing the amount of recreational facilities in its coastal areas, particularly in urban locations, and protecting such facilities for incompatible development and excessive use. For a full discussion of Program recreation policies, see Section IV of this report.

The principal conflict related to protecting the national interest in New York's coastal recreational facilities revolves around the fact that such uses often lose out in the competition for waterfront space. This occurs because: (1) most coastal oriented recreational activities are not as profitable as other land uses; (2) recreation is generally regarded as being a less then critical concern when compared to activities such as energy production, residential development or construction of transportation facilities; and, (3) coastal recreation is often dependent upon being situated in a natural environment; once development occurs, it is usually too late to restore an environment conducive to recreational activities.

The following state governmental processes ensure that the national interest in recreation will be given adequate consideration in New York State:

1. A memorandum of understanding, as required by the proposed Coastal Management Act, between the Board and the Office of Parks and Recreation will state that the Office's capital facilities planning and acquisition programs in coastal areas be undertaken only after appropriate consideration is given to the national interest.

2. Environmental impact statements (as required by SEQRA) and A-95 notifications will allow the Board to review coastal projects of substantial size and thereby ensure that consideration is given to the impact of the proposed action on the environment.

3. Siting review procedures under Articles VII and VIII of the Public Service Law require environmental impact analysis for various energy-related projects.

4. Water quality and fish and wildlife programs operated by Department of Environmental Conservation.

Water Quality Protection Facilities

The Federal Water Pollution Control Act of 1972, as amended, states the nation's basic interest with respect to maintaining the quality of its waters in

accordance with federally established standards. The Coastal Zone Management Act requires that the requirements and standards established under this water pollution control legislation be incorporated into a state's management program. New York's Program has complied with this mandate and includes water quality policies that recognize both federal and state priorities. The agreement between the Environmental Protection Agency and New York State details those priorities.

All significant coastal water bodies are, therefore, considered resources for which pollution control is in the national interest. All countywide and regional waste treatment plants are considered by this Program to operate in the national interest.

There are several types of conflicts that have risen or may arise in attempts to achieve this national interest. Industrial discharges are perhaps the most pervasive cause of water pollution, but efforts to restrict them may sometimes inhibit the economic growth of an area. Navigation causes deterioration in water quality to the extent that improper dredging, vessel wastes and oil spills cause pollution. Certain types of energy development activities increase the likelihood of oil spills or harmful fluctuations in water temperatures. The effect of agricultural runoff is as yet not precisely determined, but it may prove to be a significant water quality factor.

All of the programs described in Section IV, WATER QUALITY, were designed to improve water quality and thereby serve the national interest. For any individual project, the Coastal Management Board can ensure that the national interest is considered through the A-95 and SEQRA processes, as explained previously, as well as through notification and review of permit applications. The specific national interest in wastewater treatment facilities is ensured through Article 17-1905 of the Environmental Conservation Law, which indicates that the State can:

1. Deny state assistance to any municipality which fails to operate and maintain its sewage treatment plants in accordance with state standards applicable to such facilities.

2. Annually inspect the maintenance and operating conditions, including the collection of necessary flow and analytical data and sampling results, at each sewage treatment plant for which state assistance is granted; and,

3. Promulgate rules and regulations as may be necessary, proper or desirable to carry out effectively the provisions of this law, including, but not limited to, standards of operating efficiency for sewage treatment works, based on the best usage of the receiving waters, type of treatment provided, and available dilution.

Living Marine Resources

In determining the national interest in living marine resources, the following documents, specific legislation, and agencies were consulted:

- Fishery Conservation and Management Act of 1976.
- A Compilation of Federal Laws relating to Conservation and Development

of our Nation's Fish and Wildlife Resources, Environmental Quality, and Oceanography. The Library of Congress, Congressional Research Service, January, 1975.

. Living Coastal Resources; A Marine Fisheries Program for the Nation. U.S. Department of Commerce/NOAA, National Marine Fishery Service and U.S. Department of Interior, Fish and Wildlife Service; July, 1976.
. U.S. Fish and Wildlife Service
. U.S. Army Corps of Engineers
. National Marine Fisheries Service
. Marine Mammal Commission

The major objectives of the national interest in living marine resources are expressed as follows: (1) to conserve, enhance and manage in a rational manner commercial fishing which constitutes a major source of employment and contributes significantly to the food supply, economy and health of the nation; (2) to strengthen the contribution of marine resources to recreation and other social needs; and, (3) to develop and protect all species of wildlife and their habitat, and to control losses by damage to habitat areas through coordination with other features of water resource development programs.

New York Program policies relative to living marine resources are discussed in detail in Section IV of this report. The state policies emphasize the importance of protecting, and at the same time, deriving economic gain from its living marine resources. In view of this, it appears that New York's policies are consonant with national interests in living marine resources.

Protection of living marine resources is almost always jeopardized when coastal land is developed, or where there is significant degradation of the general environment. Conflict between marine resource protection and development forces is not one-sided, of course, Efforts to protect marine resources may sometimes inhibit military, transportation, industrial, commercial, residential, or recreational activities.

All the programs described in Section IV, FISH AND WILDLIFE Resources, are designed to protect living marine resources and thereby serve the national interest. The Coastal Management Board's review role in the A-95 and SEQRA processes, as explained previously, will ensure that consideration of the national interest in protecting these resources is provided.

Historic Structures and Sites

In determining the national interest in historic sites and structures the following documents and federal agencies were consulted:

. Archaeological and Historical Preservation Act of 1974 (P.L. 93-291)
. National Historic Preservation Act of 1966 (Executive Order 11593), amended under the Land and Water Conservation Fund Act of 1976.
. National Environmental Policy Act of 1969.
. National Park Service.
. Advisory Council on Historic Preservation.

From the above sources, it was determined that the major objectives of the national interest in historic properties are: (1) to protect significant historic (including archaeological) properties from adverse impacts; and, (2) to consider cultural resources in assessing the environmental impacts of proposed activities.

The State Program regards the protection of coastal historic properties listed on the National Register of Historic Places to be in the national interest. The Program has designated all such historic properties as a generic category of GAPCs, intending to ensure priority attention from all state and federal agencies.

General development, including construction of transportation and other major facilities, often threatens the preservation of these historic structures and sites. On the other hand, efforts aimed at their preservation may inhibit development that otherwise would be desirable.

State Environmental Quality Review legislation requires that an environmental impact statement be prepared for any development action that would have an "adverse impact on any historic or prehistoric site, building, or structure listed on the National Register of Historic Places or having an adverse impact on any historic or prehistoric building, structure or site that has been formally proposed by the Committee on the Registers for consideration by the New York State Board on Historic Preservation for a recommendation to the State Historic Officer for nomination for inclusion in said National Register." Such required statements will be reviewed by the Board to determine if the national interest was adequately considered. Also, the Board will utilize the Program's consistency requirements as means of ensuring that the national interest is considered in federal and state agencies' actions which affect historic structures and sites in coastal areas.

Uses of Regional Benefit

As indicated previously, a state's coastal management program must provide for the means of assuring that local land and water use regulations within the coastal area do not unreasonably restrict or exclude land and water uses which are of regional benefit. This requirement addresses the situation where a local government may oppose or place severe limitations on the siting of a needed regional serving facility; or in another situation, a municipality may fail to adequately protect natural resources which are deemed to be of areawide importance.

Identification Criteria

The State Program must identify uses of regional benefit and then demonstrate how each will not be unduly restricted or excluded. To assist the state in this identification effort, two federal guidelines are to be followed. First, the use or facility must have an effect on more than one unit of local government. Second, the use or facility must have a direct and significant impact on coastal waters.

This Program is recommending that two additional guidelines be used in the identification of these regional uses. Since the overall objective of the state Program is to implement its coastal policies, it is suggested that such regional uses or facilities should assist the State in the achievement of its policies. In particular, the need for a waterfront location should be taken into consideration, for it is the land along the shoreline where local, state and national concern is the greatest. The other recommended guideline that should be employed in the identification process is public ownership or provision of area-serving uses and facilities.

Types of Regional Uses

Based upon the above federally required and state recommended guidelines, several types of land and water uses are identified, as well as the means for assuring that such uses will not be unreasonably restricted or excluded by local regulations.

1. Recreational uses of regional benefit shall include:

   - State parks and other recreational uses
   - County parks and other recreational uses
   - Commercially operated water-dependent recreational uses

   All of the above uses satisfy the identification criteria. First, they provide recreational opportunities to people who reside both within and outside the municipality where such uses are located. Second, these uses may have direct effects on coastal waters in terms of utilizing the waters for recreational purposes or possibly impairing their quality. Third, all of the uses are cited in coastal policies for increasing water-oriented recreational opportunities, and where this is the case, a waterfront location is necessary to offer these opportunities. Finally, most of these uses are in public ownership.

   The above recreational uses are not unreasonably restricted by local laws and ordinances. The acquisition and subsequent development of land within the coastal areas for state or county recreational purposes are not subject to local regulations. Case law, rather than statutory provision, is the basis for this determination. Several judicial decisions have declared that state and county governmental functions are not subject to local land use regulations.[1] Therefore, the siting of such recreational uses within a municipality cannot be unreasonably restricted or prohibited.

   The proposed water-dependent use legislation (see Appendix B) would apply to such commercially operated recreational uses. In the local governments affected by the legislation, such uses may be accorded locational priority in identified waterfront locations. In review of these local regulations, the Coastal Management Board will take into consideration the feasibility and potential for such commercial recreational uses along the municipality's waterfront.

2. Transporation uses of regional benefit shall include:

   - State and county highways, including necessary bridges and tunnels
   - Intercity and commuter rail service facilities, including necessary bridges and tunnels
   - Major cargo handling ports

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1 For general discussion this subject, see Anderson, New York Zoning Law and Practice, Section 9.04, (2nd. Edition. 1973). Specific judicial decisions on this topic are as follows:

- City of Rochester v. Town of Rush, 336 NYS 2d 160, 71 Misc. 2d 451 (1972)
- Nehrbas v. Incorporated Village of Lloyd's Harbor, 2 NY 2d 190, 159 NYS 2d 145 (1957)
- Village of Larchmont v. Town of Mamaroneck, 239 NY 551 (1924)

These transportation uses satisfy the two required identification criteria and partially fulfill the recommended guidelines. With respect to the required criteria, the above uses and facilities are of benefit to the residents in the locality as well as the people and businesses in the general area in which such uses are located. Also, depending upon their proximity to coastal waters or tributaries, the operational characteristics of these uses are of a nature that they may have direct and significant impacts upon the waters. In terms of the recommended criteria, the Program policies address either singularly or collectively the above transportation uses, for they are essential to economic activity within coastal areas and the State as a whole. Ports do require a waterfront site, whereas the other two transportation uses do not, except in situations where a water body must be traversed to provide for uninterrupted service. Finally, most of the state and county highways are provided and maintained by their respective governments. There are situations, however, where this is not true for parts of New York's coastal areas. For example, public authorities have been established, such as the Triborough Bridge and Tunnel Authority in New York City,[2] for the purposes of constructing necessary bridges, tunnels and roadways leading to such facilities. All of the state's major port facilities and some of its rail service facilities are also constructed and maintained by public authorities established under New York's Public Authority Law. Some railroad lines in New York's coastal areas are still under private ownership, such as the Delaware and Hudson.

State and county highways would not be subject to local regulation for the reasons discussed previously. Most of the major ports and rail facilities are not subject to local siting restrictions because of the powers generally granted to public corporations and authorities. In situations where such facilities are not owned by public entities, the proposed water-dependent use legislation can provide for the locational priority necessary for such port and rail transportation uses.

3. Energy uses shall include:

   . Electric generation and transmission facilities

These uses and facilities fulfill several of the previously described identification guidelines. First, major electric, gas and petroleum facilities usually are beneficial, for they supply the energy necessary for the operation of industries, transportation vehicles and services, and home heating. Second, these uses can have considerable impacts upon coastal waters. Third, if these facilities are properly sited and operated, several Program policies will be achieved and statewide concerns over their effects on water quality, fish and wildlife, air quality and aesthetics will be lessened. Also, some of these facilities do require locations along the waterfront or access to coastal waters in order to successfully function. Finally, some major electric generation and transmission facilities are provided by the Power Authority of the State of New York (PASNY).

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2 See N.Y.S. Public Authority Law, Article 3, Title 3.

Steam electric generation and electric and gas transmission facilities are subject to the single comprehensive siting and permit procedures established under Article VII and VIII of the Public Service Law. These processes ensure that such facilities will not be unreasonably restricted or opposed by local regulations. Hydroelectric and nuclear-fueled generation facilities are subject to federal review and approval.

Federal Consistency

Federal agencies are responsible for numerous programs which have the potential to further the policies and purposes of the New York State Coastal Management Program. The Coastal Zone Management Act of 1972, as amended, states that: "Each federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practical, consistent with approved state management programs."

It is the intent of this section to set forth procedures which will insure that such programs shall be, to the maximum extent possible, consistent with the New York State Coastal Management Program and in accord with the federal Coastal Zone Management Act of 1972, as amended. The Coastal Management Board will be responsible for consistency review.

The following federal actions are subject to the consistency review procedures:

1. Direct Federal Activities/Development Projects
2. Federal Licenses and Permits
3. Federal Assistance
4. Outer Continental Shelf (OCS) Activities

Direct Federal Activities/Development Projects

Type of Action

A development project includes any federal activity involving the planning, construction, modification, or removal of public works, facilities, or other structures, and the acquisition, utilization, or disposal of land and water resources. Federal activities include federal actions which are neither development projects nor actions covered in the other parts of this section.

Notification Procedures

1. To provide an opportunity for preliminary discussion, federal agencies shall provide to the Coastal Management Board routine and timely notification of:

   a. All proposed activities and development projects to be located within the New York State coastal boundary.

   b. All projects that are likely to directly affect or impact the coastal area but are not actually located within the area defined

by the boundary. In determining significant effect the federal agency shall employ the following criteria:

- physical projects contiguous to the state's coastal boundary with the potential to impact coastal lands and waters
- physical projects contiguous to tributaries with the potential to impact coastal lands and waters
- in case of questions in determining potential impact the federal agency shall consult with the Department of State

2. Not less than ninety (90) days before final approval of the federal action, notification of the proposed action or project shall be submitted in writing directly to the Board. A draft environmental impact statement where required will serve as necessary notification.

3. Notification must include an involved agency's evaluation which indicates how the proposed action or project will be undertaken in a manner that is consistent with relevant policies of the New York State Coastal Management Program.

4. Notification must also describe the proposed action or project in sufficient detail, including, as appropriate, facility development plans, maps, engineering drawings, or other data and information to support the federal agency's conclusion and to allow the Board to independently evaluate its consistency with the relevant policies of the New York State Coastal Management Program.

5. In addition to the federal activities and development projects listed, the Board reserves the right to review and comment on the consistency of other federal activities and development projects which may significantly affect the state's coastal resources. The Board shall monitor such federal activities and development projects through the state's designated A-95 clearinghouse, through review of NEPA environmental impact statements or through other applicable review processes. The Board shall notify the appropriate federal agency and the Assistant Administrator of Coastal Zone Management of its intention to review the consistency of the proposed federal activity or development project with applicable policies of the New York State Coastal Management Program. Such notification shall be in writing and shall be made within 45 days from receipt by the Board of notification of the federal activity or development project.

Review Procedures

1. Within forty-five (45) days from receipt of the federal agency notification, the Coastal Management Board shall notify in writing the federal agencies proposing activities and development projects, of its agreement or disagreement with their consistency determinations. If the Board within the 45 day period described, requests an extension of time to review the matter, the federal agency shall grant one 15 day extension, and may, in its discretion, grant a longer extension.

2. Where the Board disagrees with a federal agency determination of consistency, it shall stipulate how the proposed action or project is believed inconsistent with the relevant policies of the state's

Coastal Management Program and shall recommend alternatives to, or modifications of the proposed action or project which would render it consistent with the applicable policies.

The following federal activities and development projects will be subject to federal consistency provisions:

a. Department of Defense
   Army Corps of Engineers:
   - Proposed project authorization for dredging, channel works, breakwaters, other navigational works, erosion control structures, beach replenishment, dams, and other projects with the potential to impact coastal lands and waters.

   Airforce, Army, Navy:
   - Location and design of new and enlarged defense facilities; actions conducted on federal lands with potential impact.

b. General Services Administration
   - Location and design of proposed federal government property acquisition and building construction.
   - Disposal of surplus federal lands.

c. Department of Interior
   Fish and Wildlife:
   - Management of national wildlife refuges and proposed acquisitions.

   National Park Service:
   - Park and seashore management and proposed acquisitions.

d. Department of Transportation
   - Location and design of new and enlarged Coast Guard stations, bases, and lighthouses.
   - Location and design of avaiation communication of air navigation facilities.

Federal Licenses and Permits

Type of Action

Federal licenses and permits include any authorization, certification, approval, or other form of permission which any federal agency is empowered to issue to an applicant. The term also includes renewals and major amendments of federal license and permit activities which cause significant effects on coastal resources.

The term "applicant" means any individual, public or private corporation, partnership, association or other entity organized or existing under the laws of the State or any state, regional or local government who, following management program approval, files an application for a federal license or permit to conduct an activity significantly affecting coastal resources.

Notification Procedures

1. Applicants for all federal licenses and permits identified below must provide the federal agency and Coastal Management Board a certificate of consistency along with necessary supporting information.

   - Cerfitication shall be in the following form:
     "The proposed activity complies with the New York State approved Coastal Management Program and will be conducted in a manner consistent with such program."

   - Supporting information shall include a detailed description of the proposal, an assessment of probable coastal area effects, and a set of findings that the proposed activity is consistent with the relevant policies of the New York State Coastal Management Program.

2. Federal agencies shall not approve any license or permit for which requisite state permits or licenses required under applicable New York State law and regulations have not been obtained. A state permit or license shall along be deemed a valid state certification of consistency with the applicable policies of the New York State Coastal Management Program.

3. In addition to the permits and licenses listed, the Board reserves the right to review and comment on the consistency of other federal permit and license applications which may significantly affect the state's coastal resources. The Board shall monitor such federal license and permit activities through the State clearinghouse (A-95), through review of NEPA environmental impact statements and through such other review processes. Prior to undertaking such review, the Board shall notify the appropriate federal agency, the applicant, and the Assistant Administrator of Coastal Zone Management of its intention to review the consistency of any proposed federal permit and licensing activities with applicable policies of the New York State Coastal Management Program. Such notification shall be in writing and shall be made within a period not to exceed 30 days from notice date of the federal license or permit application.

Review Procedures

1. At the earliest practical time from receipt of the applicant's consistency certification and supporting information, the Coastal Management Board shall notify the applicant and federal agency whether it concurs or objects to the consistency certification. If the Board has not issued a decision within three months following commencement of its review, it shall notify the federal agency and the applicant of the status of the matter and the basis for further delay. Concurrence shall be conclusively presumed in the absence of an objection within six months of receipt of the applicant's consistency certification.

2. State consistency determinations shall in all cases be subject to public notice and appeal of the proposed activity. Public notice must include a summary of the proposal, an announcement that public information submitted by the applicant is available for inspection, and a statement that comments may be submitted.

Within 10 days from receipt of the applicant's consistency certification and supporting information, the Board will provide for notice of such certification to be published in the next available environmental notice bulletin and in a newspaper having general circulation within the locality where the license or permit activity is proposed.

After evaluating the applicant's consistency certification and any comments by other state agencies, or units of government or members of the public, the Board shall, within 60 days from receipt of the consistency certification, determine whether or not to conduct a public hearing on the certification and mail written notice to the applicant of a determination to conduct a public hearing.

If a public hearing is to be held it shall commence within 90 days after receipt of the applicant's consistency certification. Notification of such hearing shall be given by certified mail to the applicant within 15 days prior to the date set for such hearing. In addition the Board will provide for notice of such hearing to be published in the environmental bulleting and in a newspaper having general circulation within the locality where the license or permit activity takes place.

3. Where the Board objects to the applicant's consistency certification it shall indicate the nature of the inconsistency with reference to the specific policies of the Coastal Management Program. Alternatives to or modifications of the proposed action which would render it consistent with the program shall be recommended. The applicant shall be notified of his rights to appeal a Board's finding of inconsistency to the Secretary of Commerce.

The following federal permits and licenses will be subject to federal consistency provisions:

a. Department of Energy

Federal Energy Regulatory Commission -

- .Licenses for construction and operation of hydroelectric generating projects including primary transmission lines.
- .Permits and licenses for construction and operation of facilities needed to import, export, or tranship natural gas.

b. Environmental Protection Agency

- .Permits and licenses required under section 402 and 405 of the Federal Water Pollution Control Act.
- .Permits and licenses under the Clean Air Act.

c. Department of Defense

Army Corps of Engineers

- .Permits and licenses required under the Rivers and Harbors Act.

. Permits and licenses required under the Marine Protection, Research and Sanctuaries Act.
. Permits and licenses required under the Federal Water Pollution Control Act.

Department of Interior

U.S. Geological Survey

. Permits and licenses for geological and geophysical exploration.

Bureau of Land Management

. Permits and licenses required for drilling and mining on Outer Continental Shelf Lands.
. Permits and approvals of exploration and operating plans pertaining to extraction of minerals.

Federal Assistance

Type of Action

The term, federal assistance, means assistance provided under a federal program to an applicant agency through grant or contractural arrangements, loans, subsidies, guarantees, insurance, or other forms of financial aid.

Notification Procedures

1. Applications for federal assistance by units of state or local government and/or related public entities to plan for, design, build, alter or expand physical development projects (identified below) shall be routinely forwarded to the Board by the State Clearinghouse (A-95) for certification of consistency with applicable policies of the New York State Coastal Management Program.

2. In addition, the Board reserves the right to monitor proposed federal assistance projects other than these listed through the A-95 and NEPA review processes and other similar mechanisms. Where such monitoring indicates a significant impact on the coastal resources, the Board shall notify the applicant agency, involved federal agencies, and the Assistant Administrator for Coastal Zone Management of its intent to make a consistency determination.

Review Procedures

1. Within the 30 day period which Circular A-95 provides for review, the Board shall notify the State Clearinghouse of its objections, if any, to the proposed project. Such objections will describe how the proposed project is inconsistent with the applicable Coastal Management Program policies and shall recommend, if appropriate, such alternative measures as may serve to render the project consistent with the Coastal Management Program.

2. The State Clearinghouse shall notify both the applicant and the federal agency of such objections and notify the applicant of the right to appeal the Board finding of inconsistency to the Secretary of Commerce.

The following federal financial assistance programs will be subject to federal consistency provisions:

a. Department of Agriculture

Soil Conservation Service:

. Watershed and flood protection

b. Department of Commerce

Economic Development Administration:

. Economic Development Planning Grants
. Economic Development Grants for Public Works and Development Facilities

c. Department of Energy

. State Energy Conservation Program

d. Environmental Protection Agency

. Air Pollution Control Grants,
. Construction Grants for Wastewater Treatment Works,
. State and Interstate Program Grants for Water Pollution Control

e. Department of Housing and Urban Development

. Housing Assistance Grants,
. Community Development Block Grants,
. Section 701 Planning Assistance Grants

f. Department of Health, Education and Welfare

. Comprehensive Health Planning Grants,
. Areawide Comprehensive Health Planning Grants

g. Department of Interior

Heritage Conservation and Recreation Service

. Land and Water Conservation Fund

Fish and Wildlife Service

. Endangered Species Act

h. Department of Transportation

Federal Aviation Administration:

. Airport Development Aid Program

Federal Highway Administration

. Federal Aid Highway Program

Urban Mass Transportation Administration

. Urban Mass Transportation Grants

1. Water Resources Council

. Water Resources Planning Grants

Outer Continental Shelf (OCS) Activities

Type of Action

Outer Continental Shelf activities include plans for the exploration of, development of, or production from, any area which has been leased under the OCS Lands Act (43 U.S.C. 1331 et. seq.) as amended and the regulations under that Act, which are submitted to the Secretary of the Interior following management program approval, and which describe in detail federal license and permit activities (e.g., drilling, platform, placement, etc.)

Notification Procedures

1. Persons submitting any plan for OCS exploration, development, or production to the Department of Interior shall also submit an evaluation and certification of its consistency with the New York State Coastal Management Program.

   . Applicants shall declare in the consistency certification that: "The proposed activities described in detail in this plan comply with this approved Coastal Management Program and will be conducted in a manner consistent with such program."

   . Supporting information shall describe all federally licensed or permitted activities, and/or facilities proposed; describe how each activity will be conducted in a manner consistent with the Coastal Management Program; contain a discussion of the probable effects upon New York's coastal area of each activity; and be accompanied with sufficient data to support the consistency certification.

Review Procedures

1. Within three months from receipt of the OCS plan, consistency determination, and supporting information, the Coastal Management Board shall notify in writing the applicant, the federal license and permit agencies, the Secretary of Interior, and the Secretary of Commerce whether it concurs, in or objects to the consistency certification. Concurrence shall be conclusively presumed in the absence of an objection within three months from receipt of the applicant's consistency certification unless additional time is requested.

2. State consistency determinations shall in all cases be subject to public notice pursuant to this review, and one or more public hearings may be held pursuant to this review.

   Within ten (10) days from receipt of the OCS plan, consistency certification and supporting information, the Board will provide for notice of such certification to be published in the next environmental notice bulletin and in a newspaper having general circulation within the locality where the OCS plan is proposed.

   After evaluating the OCS plan and consistency certification and any comments by other state agencies, or units of government, or members of the public, the Board shall, within sixty (60) days from receipt of the consistency certification, determine whether or not to conduct a public hearing on the certification and mail written notice to the persons submitting the plan of a determination to conduct a public hearing.

   If a public hearing is to be held, it shall commence within ninety (90) days after receipt of the consistency certification. Notification of such hearing shall be given by certified mail to the persons submitting the plan within fifteen (15) days prior to the date set for such hearing. In addition, the Board will provide notice of such hearing to be published in the environmental bulletin and in a newspaper having general circulation within the locality where the OCS plan is proposed.

3. Where the Board objects to one or more of the federal licenses or permit activities described in the consistency certification, it shall separately discuss each objection with reference to applicable Coastal Management Program policies. Alternatives to or modifications of the proposed activity(ies) which would render the plan consistent with the Coastal Management Program shall be recommended. The applicant shall further be notified of his right to appeal the Board's objection to the Secretary of Commerce.

VII.
Geographic Areas of Particular Concern

Section VII

GEOGRAPHIC AREAS OF PARTICULAR CONCERN

Introduction

A state's coastal management program must designate geographic areas which are considered to be of particular concern because of their "coastal-related values, characteristics or impacts on them." Other areas are designated because of pressures they face, pressures which demand detailed attention beyond a state's general planning and regulatory system as proposed in the management program.

New York State has developed a comprehensive list of such areas proposed for designation as Geographic Areas of Particular Concern (GAPCs) in cooperation with a number of state, regional, county and local agencies. Many of these areas were chosen on a site-specific basis, while others were selected because of their generic characteristics. In all instances, these site-specific and generic GAPCs were so designated because of their overall significance to the state's coastal area. The proposed GAPCs represent coastal locations within New York State that are most in need of specific and, in some instances, immediate management attention in order to implement the Program's various policies. Through this designation process, the Coastal Management Program is assigning priority to these critical areas with respect to the implementation activities of all state agencies. Additionally, the ongoing programs of other state agencies will be guided by these priorities. It is anticipated that such designations will also encourage municipalities to provide for the appropriate management of these areas through local actions and programs.

GAPC Identification and Selection Approach

The Department of State developed criteria for the designation of GAPCs in New York State. These criteria, discussed in detail in Appendix F, were based on guidelines contained in the rules and regulations promulgated by the United States Office of Coastal Zone Management. In addition, the criteria were based on the major coastal concerns considered most critical by New York's Coastal Management Program. It should be noted that the key factor in each of the criteria is statewide significance. New York's designated GAPCs are all areas of statewide rather than local significance.

During the initial phase of the program, the Coastal Management Program relied on county planning agencies and the State Department of Environmental Conservation (DEC) to identify potential GAPCs. Each of these agencies submitted nominations which, in their opinion, merited GAPC designation. More than 400 nominations were received and analyzed according to established criteria. Many were eliminated because they did not meet the criteria and a preliminary list of 70 site-specific GAPCs of statewide significance was prepared. This list was circulated to local and state agencies for their review and comments. Additional information was provided by the agencies and as a result, some of the eliminated sites were placed back on the list. In addition, nominations were received from private groups and interested citizens. Several of these satisfied the criteria and were designated as site-specific GAPCs. At this time, there are 97 sites so designated; it is expected that others will be added to the list in future program years.

The Coastal Management Program has also established four generic GAPC classifications. These are categories of sites that have similar characteristics and therefore similar management objectives. Many of the sites not accepted as site-specific GAPCs qualified under generic categories.

Generic GAPCs

Four generic GAPC categories have been designated thus far by the Coastal Management Program: tidal and freshwater wetlands; historic structures and sites on the National Register of Historic Places; state parks; and existing and potential power plant sites. The management programs for each of these generic categories is summarized below. The complete management programs are presented in Appendix F. Appendix F also contains a list of the sites, by county, for each generic GAPC category (excluding wetlands).

Tidal and Freshwater Wetlands

All tidal and freshwater wetlands that come under the jurisdiction of New York State's Tidal Wetlands Act and Freshwater Wetlands Act qualify under this generic category. Wetlands perform a large number of beneficial functions. They are valuable as habitat for fish and wildlife, provide valuable open space and recreational opportunities, are essential to flood, storm, and pollution control, and are valuable links in freshwater food cycles and marine food production. These extremely valuable resources have been destroyed through dumping, dredging, and filling at an alarming rate. For example, one-third of Nassau and Suffolk Counties' tidal wetlands were destroyed between the years of 1954 and 1968 in order to accommodate new suburban development.

Management objectives for wetlands are: (1) to ensure their preservation and protection, and (2) to ensure that any development that does occur in a wetland or within its buffer zone does not interfere with or alter the natural benefits they provide. Primarily, the Coastal Management Program will rely on the tidal and freshwater wetlands legislation to carry out these management objectives.

Historic Sites

A number of historic resources that have cultural, aesthetic, and educational significance for the residents of the State are located in New York's coastal areas. Although there are various incentives at the Federal, State, and local levels for preservation, at the state level there is no legislation which prevents the owner of a historic resource from altering or, in fact, destroying it. Consequently, many historic buildings, sites, and areas have either been allowed to deteriorate or disappear completely. In its effort to reduce future losses, the Coastal Management Program has placed all historic sites on the National Register of Historic Places in the generic GAPC category.

The management objectives associated with this generic category are: (1) to ensure that each structure, site, or district is preserved; (2) to ensure that any new development adjacent to a site or district not detract from the historic or aesthetic quality of that site or district; and (3) give priority of attention to the preservation of obviously coastal-related historic resources rather than those which coincidentally are located within the coastal areas. To implement these management objectives or policies, the Coastal Management Program will rely upon several existing state acquisition programs (described in Appendix F) and the adoption of historic preservation laws and ordinances by local governments.

State Parks

The use of New York's coast for public recreational purposes is limited in many areas. This is a product of two things: (1) the large amount of shorefront land that is in private ownership (over 85% of New York's Great Lakes coastline, for example); and (2) land use patterns along the shorelines (that is, access is often limited because of existing residential, commercial, industrial, and transportation uses). State parks located along New York's coast are valuable facilities because they provide water-based recreational opportunities for many of the state residents. In recognition of their value, state parks are designated as generic GAPCs by the Coastal Management Program.

Four major management objectives have been developed for coastal state parks: (1) ensure first that water-dependent and, then, water-enhanced uses, are provided for within such parks; (2) manage lands immediately adjacent to these parks so that incompatible development is prohibited or minimized; (3) provide appropriate levels of public access to presently undeveloped state parks; and (4) encourage the attainment of park carrying capacities. The Coastal Management Program will depend upon the various powers of the State Office of Parks and Recreation and the land use regulatory powers of local governments to accomplish these objectives.

Existing and Potential Power Plant Sites

Along with the growth in demand for electric energy has come an increased awareness of the impacts that power generating facilities have upon the environment. In New York State, power generating facilities are located along every portion of the state's coast. Most of the environmental concerns are related to the large amounts of cooling water that fossil and nuclear-fueled steam-electric generating facilities require. Thermal pollution of valuable estuaries, destruction of fish and fish eggs, and destruction of local water circulation patterns result when coastal waters are used for cooling purposes. Visual blight caused by huge natural draft cooling towers and safety hazards associated with nuclear-fueled generating facilities are other major concerns. Because of these and other significant environmental impacts, the Coastal Management Program has designated existing and proposed power plants for which applicatons have been filed with the appropriate federal or state agency as a generic category of GAPC. It should be noted that if a proposed site is ultimately rejected for use as a power plant site, that site will no longer be considered a GAPC by the NYS Coastal Management Program. It also should be understood that designation of a proposed power plant site as a GAPC does not in any way constitute endorsement of the site by the Coastal Management Program.

The management objectives associated with existing and proposed power plants are, (1) to ensure that Coastal Management policies are considered in the Article VIII siting procedures for proposed power plants; (2) to ensure that all adverse impacts resulting from the construction and operation of power generating facilities be mitigated to the extent possible; and (3) to ensure that compatible development takes place within the area surrounding the power generating facility. To implement these management objectives, the Coastal Management Program will rely primarily on Article VIII of the state's Public Service Law, land use regulatory powers of local governments and federal hearing procedures (for increased participation by Coastal Management Program in hydroelectric facility hearings).

Agricultural Generic GAPC

Conservation of agricultural land is a major concern of the Coastal Management Program. Nearly all agricultural operations within the coastal areas represent highly viable economic activities, particularly the fruit and vegetable farms. These lands are, in a true sense, geographic areas of particular concern, and the policies of New York's Coastal Management Program reflect this recognition by according agriculture

the highest priority use within the coastal area. Agricultural lands, however, have not been formally designated as a generic GAPC. Several approaches for designating such lands have been considered, but, all were deemed inaccurate. While Agricultural Districts within the coastal boundaries are easily identified, they cannot be categorized as including all important coastal agricultural lands. The major problems center around the difference between actual and potential agricultural uses, and the need, if agricultural land is established as a GAPC, of setting forth a management program which may be in conflict with the owner's future plans. Because of the complexities of the issue, it was decided not to commit the State formally as to agricultural GAPCs at this time, in order to allow more time for analysis of individual areas.

Site-Specific GAPCs - As stated previously there are 97 specific sites which have been designated as GAPCs. The management programs developed thus far for site-specific GAPCs are summarized below. A more complete description of these management programs can be found in Appendix F. The following summaries are organized on a county basis.

Albany

Port of Albany

The Port of Albany is the largest upstate port facility, is the only one that is utilized on a year round basis, and has great potential for expanding the type and amount of cargo presently handled. Some of the Port's facilities are badly in need of rehabilitation and, in some cases, replacement. The provision of a container terminal and new dry bulk handling facilities would permit the Port to expand its activities. The management objectives for this vital link in New York's economy are to assure its continued existence as a viable, successful port operation and to ensure that environmental impacts resulting from any expansion be mitigated.

Bronx

Bronx River Valley

The Bronx River Valley is a natural area (containing open water, wetlands, and natural habitat area) adjacent to one of the most densely populated and blighted parts of New York's coastal area. This GAPC contains 160 acres of mapped parkland, 140 of which are undeveloped. In addition to being a potential recreational access area in a section of the city desperately in need of such access, the Bronx River Valley can accommodate substantial water-dependent industrial and commercial development. Zoning, available land, and transportation links make sections of the GAPC a potential redevelopment area. Management objectives for the GAPC are to preserve tidal wetlands and littoral areas, improve area water quality, provide waterfront open spaces and parks and public access to same, and promote economic development in appropriate places.

Chautauqua

Chautauqua Creek

Chautauqua Creek has been designated by DEC as a major resource stream. It is one of the primary salmonid tributaries of Lake

Erie and provides recreational fishing opportunities to many state residents. In addition to being a vital fish habitat area, this GAPC is a particularly scenic location because of a deep gorge and unusual bedrock outcroppings. The gorge area affords a nesting site for bald eagles, peregrine falcons, and ospreys, all endangered species. Management objectives for the Chautauqua Creek GAPC are to ensure that the water quality of the Creek itself is maintained at the "C(T)" level, to ensure that lands adjacent to the creek remain in a natural state, and to increase public access to this valuable recreational fishery.

Erie

1. Wendt Beach

Wendt Beach is one of the few fine sand beach areas along the New York portion of Lake Erie. Public recreational access to Lake Erie is scarce and the designation of Wendt Beach as a GAPC is meant to aid in the protection of this vital public access point. Management objectives are to protect the existing natural beach front, to develop additional recreational facilities, and to preserve the area's water quality.

2. Eighteenmile Creek

The creek has been identified by DEC as one of the most important salmon spawning areas on Lake Erie. In addition, the Eighteenmile Creek Gorge is a unique area of scenic beauty, characterized by steep and, in some cases, sheer shale cliffs of 70 to over 100 feet in height. The GAPC is for the most part left in its natural state. The area has historic significance as well; an archeological site of an Indian camp and important fossil deposits are located on the site. Management objectives are to preserve and protect the natural features of the gorge and to ensure that the water quality of the creek is maintained at its present high level.

3. Seneca Shoals

The Seneca Shoals, approximately 3 miles offshore in Lake Erie, is comprised of a reef 12 to 16 feet in depth. It is a major fish congregating area, a prolific fishing ground, and a spawning area. If proposals are to be implemented to improve Lake Erie's commercial and sport fishing opportunities, vital areas such as Seneca Shoals must be protected. The management objective for the GAPC is to preserve and protect the existing fisheries habitat.

4. Woodlawn Beach

Woodlawn Beach is a 6,000 foot long, 80 acre fine sandy beach. The northern portion of the beach (60 acres) is owned by the Bethlehem Steel Corporation and has been used for slag disposal. There is limited fishing, boating, and swimming within the site. Woodlawn has great potential as a public recreation site, however, recreational development is dependent on acquisition of the land

now owned by Bethlehem Steel. The nearest county beach is twelve miles away. Woodlawn Beach would provide water-based recreational access to residents of the Buffalo area. The management objectives for the GAPC are to publicly acquire, restore, and develop Woodlawn Beach as a recreational resource and to maintain Lake Erie water quality contiguous to the beach at its present "B" level.

5. Bethlehem Steel Diked Disposal Area

The disposal area is a 530-acre site that consists of underwater Lake Erie lands directly offshore from Bethlehem Steel's facilities. Bethlehem Steel Corporation would like to dike the area in order to create an enclosed slag disposal area. Slag disposal in Lake Erie can have serious negative environmental impacts. However, the future viability of this steel plant, a key economic factor in the region, may be dependent on developing a disposal site. The management objective for the GAPC is to ensure that if construction of a diked disposal area proves necessary, it is so constructed that any environmental impacts be minimized.

6. Strawberry Island

A small, horseshoe-shaped island in the middle of the Niagara River, Strawberry Island contains a marsh and reef area designated by DEC as an important fish spawning area and the most productive muskellunge breeding area in the river. This island is used primarily as a recreation, boating and fishing site. The island's existence, however, is threatened by erosion that is caused by high water levels and ice accumulation. The management objectives for the island are to preserve and protect it as a major fish/wildlife habitat area and to mitigate shoreline erosion.

7. Tifft Farm

Tifft Farm is an urban nature preserve within the City of Buffalo. It includes a variety of habitat areas: open water; cattail marsh; woodland; and old-field savannah. A variety of fish and wildlife use the area for shelter, food supply, and breeding. The area is being developed as a managed natural resource and environmental education center. Tifft Farm is part of a larger ecosystem that includes a park and intermediate areas between the park and Tifft Farm. These intermediate areas serve as a conduit and storage area for the water that flows from the park to Tifft Farm. These intermediate areas are privately owned. Management objectives for the GAPC are to ensure development of Tifft Farm as an urban wildlife refuge and environmental education center, to regulate development in the Farm's tributary areas in order to protect the quality of the water sources and ensure flowage easements, and to develop a trailway between South Park and Tifft Farm.

8. Port of Buffalo Outer Harbor

The Outer Harbor, formed by two breakwaters extending from the Buffalo River to the city's southern boundary, is the site of Buffalo's major port activities. Docking, storage (indoor and

outdoor), and inland transportation facilities exist at this site. The Outer Harbor can accommodate more industrial development, particularly port related, than now presently exists. There are vacant sections of the Outer Harbor that can accommodate recreational uses as well. Management objectives for this GAPC are to develop a Buffalo Waterfront Redevelopment Study as recommended in the Erie-Niagara Counties Regional Planning Board's Buffalo River/Buffalo Creek Recreation and Open Space Plan, to improve the capability of the Outer Harbor port facilities, and to encourage the location of water-related industry in to the existing vacant sites within the harbor.

9. Buffalo Inner Harbor

The Inner Harbor lies southwest of downtown Buffalo and includes land on both sides of the Buffalo River. It is the original site of Buffalo's port, but is now obsolete as a modern shipping facility due to the river's shallow depths and winding channel. If the river was realigned, shipping and port facilities could be expanded. Heavy industry is the predominant use within the GAPC; much of the land, however, is now vacant or underused. The river's water quality is poor. If it is upgraded, much of the vacant land could be used to provide access for recreational uses along the river. The management objectives for the Inner Harbor are to develop an interim land management technique that addresses the problems of the Inner Harbor, and to improve the water quality of the Buffalo River.

Jefferson

Henderson High Banks and Lake Ontario Islands

This GAPC consists of limestone cliffs with heights of 75 feet and six Lake Ontario islands. The six islands provide nesting and feeding areas for a wide range of bird species, and the cliffs are a unique geological formation. The Town of Hounsfield has no zoning ordinance to manage land uses on the islands, although they are all presently undeveloped. The islands have littoral zones in which fish spawn and feed extensively. Management objectives for this GAPC are to protect the island's colonial bird breeding habitat and to protect the area's scenic quality.

Kings

Spring Creek Area

The Spring Creek GAPC is one of the largest undeveloped areas in New York City. A number of valuable wetlands remain as well as a large undeveloped urban renewal tract with $44 million worth of infrastructure improvements. The major issue facing the Spring Creek area is balancing economic redevelopment and environmental protection objectives. In addition, Spring Creek can provide valuable recreational opportunities if access can be developed to the adjoining Gateway National Park system. Management objectives for the Spring Creek GAPC are to preserve tidal wetlands and littoral areas, to improve the area's water

quality, to provide public access to the water, to promote development in the Spring Creek Urban Renewal Area, and to incorporate environmental considerations into the city's land development plan for Spring Creek.

Monroe

1. Braddock Bay

The Braddock Bay GAPC includes an embayment, two creeks, and freshwater wetlands. These wetlands provide valuable habitat to a number of fish and wildlife species and represent 35% of the remaining wetlands in the coastal area between Rochester and the Niagara River. There are a number of small marinas scattered around the bay which serve a moderate number of recreational boaters. There is pressure to develop the bay as a harbor of refuge, but such development would threaten its aesthetic qualities and habitat areas. Much of this GAPC is included in a largely undeveloped state park. If access to the park is improved, recreational opportunities (fishing, particularly) can be significantly expanded. Management objectives for the GAPC are to upgrade the water quality in the bay, the creeks, and adjacent wetlands, to preserve and protect the wetlands and to provide recreational boaters with a safe, maintained harbor.

2. Port of Rochester

The port consists of 23 acres within the Rochester Harbor. For the most part, its facilities have deteriorated in the past few years because of a general decline in the usage. The port may have more potential as a recreational boating facility given its present inability to attract additional cargo. By converting the port to recreational use (marina and support facilities), the recreational value of the entire Rochester Harbor may be enhanced. The management objective for the port is to develop an effective management plan that would determine feasible uses for the facility.

Nassau

Hempstead Harbor

This is a major harbor with industrial, commercial, and utility uses located along much of its waterfront. Adjacent to the harbor are both tidal and freshwater wetlands. Potential for increasing public access to the waterfront seems promising because some of the existing industrial and commercial uses will be obsolete in the future. A large portion of the harbor is underdeveloped, and if developed for recreation uses it will enhance the town and county beaches located in the harbor. Poor water quality is a recurring problem causing the occasional closing of the harbor to shellfishing and swimming. The management objective for Hempstead Harbor is to convert it from predominantly industrial uses to an area with increased public access, recreational opportunities, and marine commercial uses.

1. Niagara River Gorge

This GAPC is located immediately below Niagara Falls and is characterized by unique vistas, geologic formations, and natural habitat areas. The crest of the gorge is 200 feet above the Niagara River; the gorge wall is characterized by sheer cliffs and wooded areas. The gorge area has been designated as a significant fish and wildlife habitat by DEC. Unfortuantely, this unique area is often inaccessible to the general public. Unless access is improved, recreational opportunities such as hiking, fishing, and sightseeing will suffer. Management objectives for the gorge are to preserve this unique geologic formation and significant scenic resource, and to improve access to the area.

2. Wilson Harbor/Tuscarora Bay

The bay is an area of unique scenic importance. The land adjacent to the bay and Lake Ontario offers exceptional views of boating activity in the bay. The upstream section of the bay is a large freshwater wetland which serves as an important fish and wildlife area. The bay is recognized as a major fish spawning area and a prolific salmonid ground. Marina facilities are located on several islands in the bay. The GAPC is a vital recreational access point in this section of Lake Ontario. Management objectives for the GAPC are to maintain sufficient depth in the Wilson Harbor channel for boats, to preserve existing wetland and fish habitats and to maintain and improve the recreational fishing activity in the Wilson Harbor area.

3. Olcott Harbor

Olcott Harbor is located at the mouth of Eighteenmile Creek and Lake Ontario. This is a prime recreational boating area because it is one of the few areas in western New York State capable of handling boats with drafts greater than six feet. DEC has identified the waters of Lake Ontario adjacent to the harbor as a significant fish habitat area. The harbor's aesthetic quality is severely diminished due to the presence of blighted structures within the Village of Olcott. Management objectives for the Harbor are to redevelop vacant and rundown sites in the Olcott Marine District as marine oriented commercial establishments and to encourage a harbor improvement project to increase boating opportunities and provide a harbor of refuge.

4. Eighteenmile Creek

This GAPC is an extremely scenic and valuable natural preserve that is threatened by water quality problems. DEC has recognized the creek as a major fisheries resource stream with spawning habitat for salmonids, northern pike, and smallmouth bass. The creek suffers from low water flow problems and sediment accumulation due to excessive storm runoff. Also the creek is inaccessible to the

public for recreational fishing. Management objectives for this GAPC are to monitor and improve the creek's water quality, to protect its natural features and to develop pedestrian access facilities to the creek.

5. Tonawanda Island - Barge Canal

Tonawanda Island is a small, heavily industrialized area with a large number of vacant parcels of land. The Barge Canal is 200 feet wide at its mouth and is used primarily for recreational boating. The entire area is underutilized. Various existing modes of transportation and vacant lands make the GAPC most suitable for industrial and commercial redevelopment. The vacant land along the Barge Canal offers opportunities for increased public access to this water body and appropriate recreational facilities. Such facilities should incorporate the historical significance of the Barge Canal. Management objectives for the GAPC are to encourage the economic redevelopment of vacant and outdated industrial facilities on Tonawanda Island and to improve public access and recreational opportunities along the Barge Canal.

Orleans

Johnson Creek

Johnson Creek has been designated by DEC as one of the five Lake Ontario tributaries that are major resource streams. The creek supports a variety of fish species, including coho and chinook salmon, large and smallmouth bass, and northern pike. Because of a sand bar at the mouth of the creek and a very swift outflow, access to the creek is particularly difficult. Boating facilities are almost non-existent. Management objectives for Johnson Creek are to ensure that the water quality of the creek continues to meet its "C" classification, to preserve the natural character of adjacent lands thus ensuring its status as a major resource stream, and to develop some boating activity at the mouth of the creek.

Richmond

South Richmond Natural Drainage Basins Area

This Staten Island GAPC is a large natural area that provides unique visual relief from the intensely urbanized New York City area. Hills, open water, undeveloped beaches, tidal wetlands, and upland woods possess aesthetic qualities and provide a significant habitat for a variety of fish and wildlife. This natural area is threatened by the New York City Division of Water Resources' proposed sewer network. Present waste disposal systems must be upgraded, but the proposed sewer network will have serious negative impacts on the areas which are significant for their wildlife habitat and recreational values. For example, the Lemon Creek natural drainage basin topography would be significantly altered by the filling of large areas of the basin. Management objectives for this GAPC are to achieve water quality with minimal impact, to protect the extensive natural areas, to regenerate coastal ecosystems, and to provide increased public access.

1. Cold Spring Harbor

Cold Spring Harbor is recognized as one of the most scenic areas on Long Island. The harbor itself is flanked on either side by wooded hills; views set against these hills of Long Island Sound and boating activity in the harbor are often spectacular. Valuable tidal and freshwater wetlands exist throughout the GAPC, providing habitat for a variety of fish and bird species. Private uses on leased land and general inaccessibility to the waterfront have limited public access to the harbor. Management objectives for Cold Spring Harbor are to retain its scenic quality, to preserve the natural resources in the inner harbor and inland streams and ponds, and to provide additional public access to the harbor area.

2. Kings Park-San Remo

This GAPC has been designated by DEC as a significant fish and wildlife habitat area. The Nissequoque River runs adjacent to the GAPC. Extensive wetland areas are found at this site, but they are threatened by high density single family residential developments, using cesspools for waste disposal. Much of the land in the GAPC is under state ownership and is occupied by an obsolete state psychiatric facility. The state-owned land has potential as a passive recreation area (hiking, bird watching, etc.) Public access to this GAPC is now quite limited. Management objectives for Kings Park-San Remo are to preserve its wetlands and enhance its existing scenic qualities, to convert the state-owned psychiatric hospital property (which will in the immediate future be declared surplus) to a combination of residential and recreational uses, and to provide additional public access to existing state-owned lands.

3. Port Jefferson Harbor

Industrial and commercial uses predominate along the waterfront of this natural north shore harbor. Steep hills, some rising as high as 250 feet, surround the harbor. The main navigation channel within the harbor is 25 feet deep and accommodates petroleum barges and tankers. The Village of Port Jefferson and the Long Island Regional Planning Board comprehensive plans identify the harbor as ideal for recreational boating, for it is well maintained and protected. Located in the rapidly growing portion of Long Island, the harbor must be able to accommodate a large amount of the area's projected increase in boating activities. The management objective is to concentrate water dependent industry and commerce in the northwest portion of the harbor and thus increase recreational opportunities in the remaining portions.

4. Cow Neck

Most of the Cow Neck GAPC is included in a large estate. The site includes freshwater and tidal wetlands, forest lands, and some single family homes in the southern section. Cow Neck comprises well over 1,000 acres, most of which has remained unchanged for years. This natural area is a unique breeding ground for fish and wildlife. Cow Neck also contains valuable agricultural land which reflects the excellent soils found on Long Island's south fork. Management objectives for this GAPC are to maintain the freshwater and tidal wetlands and to maintain existing agricultural land in active use.

5. Robin's Island

Robin's Island, with an area of 445 acres, is an estate with woods, open fields, tidal and freshwater wetlands, dunes, and beach. Combined, these natural features make the island a unique habitat area. Since access to the island is controlled and limited in its use as a summer estate, the value of the habitat is enhanced. Because of the existing beach, the island has some recreational potential. Management objectives for this GAPC are to retain it as natural open space and to allow some public access for passive recreational uses.

6. Shelter Island

The portion of Shelter Island designated as a GAPC has extensive tidal and freshwater wetlands as well as open fields and wooded areas. These areas make Shelter Island a significant fish and wildlife habitat. Most of this GAPC is owned by a single real estate company which intends to construct single family homes on the site. These valuable natural areas can be preserved, but this GAPC can also provide a variety of controlled recreational uses. Low density housing development can probably be accommodated, provided the town master plan proposals for clustering development are followed. The management objective for the GAPC is to preserve most of it as a natural resource area, while allowing some seasonal housing development on the remainder of the property.

7. Gardiner's Island

This 3,358 acre island, owned by the same family since colonial times, contains unique natural resources and has historic significance. Its importance as prime wildlife habitat is enhanced due to its inaccessibility. The island's size and its special characteristics strongly suggest its dedication as a sanctuary. Management objectives, therefore, are to preserve the island in its natural state.

8. Napeague

New York State has acquired more than two-thirds of this GAPC for state park development. It is a low-lying area with ocean dunes, extensive coastal dune fields, freshwater and tidal wetlands, sandy beaches and frontage on both the ocean and bay. The state parkland is undeveloped at the present time. The location of the GAPC (that is, on the bay and the ocean connecting the mainland to Montauk) makes it a major corridor for tourists. Overcrowded conditions at the nearby Hither Hills State Park make it necessary to develop approprite portions of the Napeague site for limited recreational uses as quickly as possible. The management objectives for Napeague are to develop a portion of the site for low intensity recreational activities and to protect the balance of the site as a fragile habitat for rare flora and certain wildlife species.

9. Shinnecock Inlet

This inlet connects Shinnecock Bay and the Atlantic Ocean. It is flanked by two county owned beaches. The GAPC includes tidal wetlands and primary and secondary dunes which form the barrier beach protecting the mainland. One side of the inlet has about 1,000 feet of commercial development; on the other side the beach remains in its natural state. This GAPC is more than a vital recreational access point, for it has been identified by the Long Island Regional Planning Board as a prime location for a commercial fishing pier which would provide direct access to the ocean and serve as a transfer point for shipping and marketing activities. The inlet is also vital for the flushing action in Shinnecock Bay. If the inlet is not maintained this flushing action can be disturbed and access between bay and ocean made difficult. Management objectives are to provide commercial fishermen with needed dock and unloading space, to develop an unused portion of the barrier beach for oceanfront bathing, and to protect this GAPC's natural areas (wetlands and dunes).

Ulster

Kingston Quarry Sites

Two companies have been extracting clay, shale, and limestone from open pit mines for the manufacture of bricks and cement. Fugitive dust from the quarry operations and particulates from stack emissions add to the area's air quality problems. One company is closing down its operation. This closing will result in the loss of approximately 300 jobs and will have major economic repercussions for the area. The management objectives for the GAPC are to prepare a reuse plan for the Hudson Cement Site, to improve the air quality of the area immediately adjacent to both quarry sites, to ensure that mining activities are conducted in an environmentally sound manner and to ensure the reclamation of the site should mining activities be discontinued.

Wayne

Maxwell Bay

At its mouth, Salmon Creek forms a 27 acre embayment called Maxwell Bay. The GAPC has been classified by DEC as a significant coastal-related fish and wildlife habitat. It is also recognized as a valuable salmonid fishery. Pedestrian access to the creek and bay is blocked because the adjacent land is privately owned and surrounded by high bluffs. Boat access to the bay and creek is very difficult because the 30 foot wide inlet from Lake Ontario to the bay is only three feet deep on the bay side and six inches deep on the lake side. Management objectives for the GAPC are to ensure that the area be preserved in its natural state, to preserve the water quality of Salmon Creek so that it can continue to support trout and other salmonid species, and to improve public access to the bay and creek in order to increase fishing opportunities.

Westchester

Rye Playland Area

This GAPC includes a 279 acre county owned park and a bordering pond and tidal flats. The county park has a beach on Long Island Sound, a man-made lake, a fishing pier, and an amusement park. The Playland Lake and the tidal flats provide habitat for a huge variety of waterfowl. The park is the most heavily used recreational facility in Westchester County. Beach nourishment is necessary each year because wave action from Long Island Sound erodes a substantial portion of the Playland Beach. The inlet to Playland Lake must also be dredged of deposited materials in order to maintain boating access. Management objectives for the Rye Playland area are to ensure the continued existence of the park as an important regional recreation center, to preserve and protect portions of the area that provide significant habitat for shorebirds and waterfowl, and to reduce the rate of erosion in certain shore areas of the park.

These summaries represent the management programs for site-specific GAPCs that have been prepared to date. The management programs for the remaining site-specific GAPCs will be prepared over the next few years by the Department of State and by the St. Lawrence-Eastern Ontario Commission, the Long Island Regional Planning Board and the New York City Department of Planning for the sites that are within their respective regions. A complete listing of all site-specific GAPCs, by county, is included in Appendix F of this report. This list gives a very short description of the GAPC and indicates whether its management program has been completed. In addition, the list shows those sites designated as Areas for Preservation or Restoration (APR), a subcategory of GAPC.

VIII.
Amendments

SECTION VIII

AMENDMENTS

The Coastal Zone Management Act provides for changes to approved state coastal management programs in response to changing needs and conditions.

The Office of Coastal Zone Management is currently revising the federal regulations on amendments to approved state coastal management programs. The procedures set forth in this Section, therefore, are tentative. They will be coordinated with my final regulations promulgated by the Office of Coastal Zone Management which will affect amendments to the New York State Coastal Management Program.

The following summary of the Program's amendment procedures is derived from the requirements contained in the proposed Article 40 of the Executive Law.

Program Amendments

The State Coastal Management Program may be amended in several ways: (1) the boundaries of the coastal area may be changed; (2) special coastal resources and management areas may be designated; (3) management programs for GAPCs may be adopted or modified; and (4) Program policies may be added, modified or deleted.

The first two types of amendments involved changes to the official coastal area map as required under Section 906 of the proposed Coastal Management Act. The following changes to this map can be made by the Coastal Management Board after approval by the Governor:

- Boundary adjustments to correct errors or to effect technical changes.
- Landward boundary changes provided they do not extend the established limit more than 1,000 feet further inland or narrow the coastal area at any point to less than 500 feet.
- Adjustments to the coastal boundaries to accommodate the designation of GAPCs, however such GAPC designations are not to exceed 500 acres.[1]
- Inclusion of designated coastal aesthetic and agricultural resources and fish and wildlife habitats which are of statewide significance.

The Board, with the approval of the Governor, may also adopt or revise management programs for designated GAPCs. As to the fourth type of amendment, it is anticipated that some changes to Program policies can be achieved administratively, however, major amendments will result from legislative action.

Amendment Procedures

For the first three types of amendments cited above, the proposed Coastal Management Act indicates the basic steps that must be taken before the Coastal Management Board can amend the Program:

1 Wetlands subject ot the Freshwater and Tidal Wetlands Acts, state parks and proposed electric power plant sites are not subject to the amendment process, but they will be placed on the coastal map once designated by the appropriate state agency.

1. The Board must determine that an amendment is consistent with and will further the Program's legislative findings and policies. For special resource or management areas, the Board must prepare a statement as to their statewide significance.

2. A public hearing will be held by the Board in the county affected by the amendment.

3. A full description of the proposed amendment will be provided by the Board and made available for public inspection at a convenient location in community affected by the amendment.

4. The chief executive officier and clerk of the affected local government will be given notice of the public hearing.

5. Public notice of the hearing will be given not less than 10 days nor more than 30 days in a newspaper having general circulation in the locality affected by the amendment.

6. Copies of the changes to the official coastal area map must be filed with the affected county and local governments and with the Secretary of State within 20 days after action by the Board.

Changes to the Program's policies will be governed by the regulations adopted by the Office of Coastal Zone Management.

IX.
Next Steps

SECTION IX

Next Steps

Following is an outline, in chronological progression, of the remaining steps necessary to achieve an approved Coastal Management Program for New York State. The timing is of course tentative, since the steps - particularly the last three - depend on public hearings and necessary legislative action.

1. March, 1979. Print and distribute the draft Coastal Management Program and draft Environmental Impact Statement to the Governor's Office, State Legislature, local officials, and federal and state agencies.

2. March, 1979. Print and mail copies of the summary of the draft Coastal Management Program to the general public.

3. March, 1979. Filing of notice of completion of the draft Environmental Impact Statement.

4. April, 1979. Public hearings on the draft Coastal Management Program and the draft Environmental Impact Statement.

5. May, 1979. Preparation of the Final Coastal Management Program and Final Environmental Impact Statement.

6. May, 1979. Notice of completion of Final Environmental Impact Statement.

7. May-June, 1979. Passage of Coastal Management Legislation.

8. June, 1979. Formal submission of completed Coastal Management Program to the Governor for review and approval.

9. July, 1979. Submission of New York's Coastal Management Program by the Governor to the Assistant Administrator for Coastal Zone Management, National Oceanic and Atmospheric Administration, United States Department of Commerce.

X.
Draft
Environmental Impact
Statement

DRAFT ENVIRONMENTAL IMPACT STATEMENT

COVER SHEET

I. Proposed Action: Approval of Proposed New York State Coastal Management Program

II. Area Affected: Lands and waters of New York State within a defined boundary along Lake Erie, Lake Ontario, the Niagara River, the St. Lawrence River, the Hudson River (south of the Troy Dam), and the coastal areas of New York City, Nassau County and Suffolk County.

III. Preparers of Draft Environmental Impact Statement: New York State Department of Environmental Conservation and New York Department of State

IV. Agency Requiring Environmental Impact Statement: New York State Department of State, Contact Person: Robert Hansen, Coastal Program Manager, 162 Washington Avenue, Albany, New York 12231 (518) 474-8834.

V. Date Environmental Impact Statement was Accepted: February 22, 1979

VI. Date Comments are Due: May 10, 1979

DRAFT ENVIRONMENTAL IMPACT STATEMENT

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2. Jobs
3. Land Values
4. Effects on Use and Conservation of Energy

D. Social Impacts

V. Unavoidable Adverse Environmental Effects

VI. Irreversible and Irretrievable Commitments of Resources

DRAFT ENVIRONMENTAL IMPACT STATEMENT

SUMMARY

The New York State Department of State will submit for the Governor's approval a proposed Coastal Management Program. The foundation of the Program is the policies, each of which is aimed at attaining a proper balance between statewide economic growth and coastal resource protection.

For policy implementation the Program relies on 1) improved coordination of a broad range of existing state programs, to be supplemented by a minimal number of new authorities and program amendments and 2) federal consistency, a new concept which ensures that federal actions, when practical, will be consistent with state policies.

In addition, participation by local governments is being sought by the Program so that local land use regulations will be supportive of Program policies and, also, so that coordination of governmental actions can extend from the federal level right through to the local level.

Following is a short discussion of the anticipated overall consequences of the Program:

1. Substantial reliance on existing programs limits the impact the Program might have on the environment but improved coordination, increased funding, and new legislation to fill existing voids, will result in significant net benefits to the State's environment.

2. Present constitutional relationships between state and local governments will not be affected but improved coordination and cooperation between the levels of government should result.

3. Greater intensity of activity will occur in population and commercial centers, with concomitant increases in employment levels and property values. Employment levels will also rise in those industries, such as fishing, agriculture, recreation and tourism, which are dependent upon a good environment.

4. Concentration of development will result in fewer and shorter auto trips and an increased reliance on public transportation and walking. Emphasis will also be given to strengthening the energy-efficient shipping industry. Environmentally compatible energy development in Lake Erie and on the Outer Continental Shelf will also be encouraged. Each of these factors will contribute either to improved energy conservation or increased energy supplies.

5. The Program will result in heightened individual awareness of the importance of coastal areas and will promote both the natural shore and developed waterfront as areas critical to the State's future.

SECTION X

Draft Environmental Impact Statement

I. Proposed Action, Purpose and Need

The New York State Department of State has prepared a State Coastal Management Program for approval by the Governor. The Program will provide for the effective management, beneficial use, protection and development of coastal resources. Legislation has been proposed that must be enacted by the State Legislature in order to implement the Program and its coastal policies.

New York State has developed a broad range of state and local authorities, programs and policies which provide a basis for the implementation of the Program. There is a need to develop additional regulations in order to lessen damage to life and property from coastal erosion and provide for the location and subsequent development of water-dependent activities. The Program is designed to coordinate all coastal related programs in order to improve the management of coastal resources.

The proposed program was developed with financial assistance provided under the Section 305 of the Coastal Zone Management Act, and is designed to qualify New York State for federal approval and subsequent federal financial assistance for its implementation (Section 306). Prior to federal approval of the proposed program, a federal environmental impact statement will be required, in addition to a final State Environmental Quality Review Act (SEQRA) environmental impact statement.

The proposed action, its purpose and need are described in detail in various sections of the Draft Coastal Management Program.

II. Environmental Setting

The proposed Coastal Management Program will affect the coastal areas and waters of Lake Erie and Lake Ontario; the Niagara and St. Lawrence rivers; the Hudson River south from the Troy Dam; and the coastal areas of New York City and Long Island, including their adjacent waters. The specific coastal management boundaries and a specific description of the environmental setting of the areas to be affected are described in Sections II and III of the Draft Coastal Management Program.

III. Alternatives to Proposed Action

Introduction

One of the most important functions of an environmental impact statement is to provide for a clear discussion of alternatives to the proposed action and to provide a basis for choice among the alternative options by decision-makers and the public. The discussion of alternatives is especially timely now before final decisions are made about the exact nature and scope of a coastal management program for New York State.

This discussion focuses on alternatives for program authority, for institutional arrangements, and for other issues, including allocation of funding. Although innumerable alternatives could have been considered, the focus of this discussion is on the implications of a number of reasonable

alternatives that reflect the range of possible options. The primary emphasis is on the key issues for each alternative.

A. Authority for Program

A coastal management program could be based on state legal authorities exercised at either state level or delegated to local level, or a combination of both. In New York State, state agencies have been given strong management authorities for matters of statewide or regional concern, while at the same time, local governments have been given strong powers under State law to manage issues of local concern. On a number of matters there is close interrelationship between the exercise of authority at state and local levels. However, ultimate responsiblity for a coastal management program rests at the state level; State and local authority alternatives are discussed separately.

1. State Legal Authority Alternatives

a. Status Quo

The Status Quo alternative would continue all existing state programs with no new additions. A specific coastal management program would not be established.

Maintaining the Status Quo relies on the fact that the policy of the state, established under Article XIV, Section 4 of the State Constitution, is to conserve and protect its natural resources and scenic beauty and encourage the development and improvement of its agricultural lands. The Legislature, in implementing this policy, has enacted programs that already provide for the effective management of most resources in coastal areas that are of statewide or regional concern. They include, but are not limited to, such important progams as air quality management, water quality and water supply management, management of critical coastal resources such as tidal and freshwater wetlands, flood plain management, mined land reclamation, stream protection and regulation of dredging, all of which are administered by the Department of Environmental Conservation. Identified unique areas and wetlands may be acquired and managed under funding from the 1972 Environmental Quality Bond Act.

Other state programs also provide for the management, use, and regulation of resources in coastal areas. Extensive state recreation areas and programs are administered by the Office of Parks and Recreation. Transportation planning and construction programs are undertaken by the Department of Transportation. Energy planning is provided for by the State Energy Office. The siting of steam electric power plants and utility transmission lines and gas pipelines is governed by the Public Service Law, with the participation of state and local agencies and other interested parties. Siting of liquefied natural gas facilities is provided for under the Environmental Conservation Law.

The State Environmental Quality Review Act (Article 8 of the Environmental Conservation Law) requires state and local agencies to consider environmental factors in reaching decisions on proposed actions, and to prepare environmental impact statements on actions significantly affecting the environment.

All of these and other state programs are described in more detail in the following section of this Draft Environmental Impact Statement and in Appendix G of the Coastal Management Program document. State legislative authorities for these programs establish specific state policies that directly affect management of coastal resources, including the balancing of competing demands for coastal resources.

Analysis:

A wide variety of issues that affect New York's coastal area have already been given special state attention and many of the coastal resources involved are adequately managed by existing state programs. However, several gaps in coastal resource management have been identified. (See discussion of "networking", Alternative b., which follows). Because most of the existing programs were enacted in response to specific concerns, problems of coordination between the programs, particularly between state agencies and between state and local agencies, may result in gaps or conflicts in the achievement of coastal policies (described in Section IV of the Draft Coastal Management Program). Erosion damage to structures along the coast, for example, would continue to be a major concern in many areas under this alternative, as would be the problems of siting petroleum facilities and a variety of water-dependent uses. Consequent use conflicts and environmental problems could be anticipated. Mechanisms to consolidate and streamline permit processing have been established within some individual agencies, such as the Uniform Procedures Act in the Department of Environmental Conservation. However, present problems of coordination among state agencies and among state, local and federal government programs would continue, resulting in the continuation of sometimes inconsistent management of coastal resources and in continuing conflicts over competing uses of these resources.

The status quo alternative would not be eligible for approval under the federal Coastal Zone Management Act because of these specific gaps in state programs, although existing state programs provide for management of most of the statewide and regional concerns relating to coastal areas that are needed for an approved program. Under the status quo alternative, federal coastal management financial assistance would not be available to the state or local governments to help improve the management of coastal resources, nor would the federal consistency provisions of the Coastal Zone Management Act apply to help assure that federal agency actions are consistent with state policies. Most importantly, the status quo alternative would mean that the State would not have a highly focused

coastal management program, under which federal/state/local institutional arrangements would be consolidated for the specific purpose of more effectively managing coastal resources.

b. "Coordinate" existing state program authorities

Under this alternative, a state coastal management program would incorporate the strong existing base of state management programs, with new authority added to coordinate or "network" these programs to achieve identified state coastal management policies and provide for integrated management of coastal resources.

The "coordination" of the state authorities could be accomplished through interagency memoranda of understanding, through an Executive Order from the Governor, through specific state authorizing legislation. To qualify a management program for federal approval, a single state agency would be designated to administer the program, although that specific agency need not itself have the power to enforce the coordination of programs (see Section B, "Institutional Arrangements). This coordination would serve to implement identified state policies for managing coastal resources. These policies would be based largely on existing state policies affecting coastal management issues.

This alternative falls short of federal requirements for program approval, primarily because of several gaps in existing state program authorities, including authority to regulate development in erosion hazard areas. As a consequence, federal coastal management assistance would not be available, and the federal consistency provisions would not apply to New York State.

Analysis:

Under the coordination alternative, existing state agency program authorities and responsibilities would remain intact and would be used to implement the identified state coastal management policies, although some changes in state agency regulations would be necessary. State agencies would be required to ensure that their proposed actions in coastal areas are consistent with the coastal management program and its policies. While the need to assure consistency of state and local programs with coastal management policies will result in a new level of government administrative review in coastal areas, the result could either expedite or delay state and local program implementation, depending on the effectiveness of the review procedures.

This alternative would ensure the coordinated management of coastal resources in matters of statewide or regional concern, but would leave gaps in existing authorities, and would fail to qualify the state for federal approval of a coastal management program, with the consequences discussed above.

c. "Coordinate existing state program authorities plus additional program authorities to fill gaps (proposed alternative)

This alternative would be the same as the coordination alternative, but with the addition of several specific new program authorities to fill identified gaps in existing programs, thus qualifying the state's program for federal approval under the Coastal Zone Management Act. Existing program authorities being coordinated must also be shown to be enforceable in order to secure federal approval. These additions would include authority to regulate development in erosion hazard areas (conditionally delegated to local and county governments), and to provide for designation of water-dependent uses.

Analysis:

The coordination plus new program authorities alternative would share most of the consequences of the coordination alternative discussed above; but because it would fill the gaps noted in that alternative, New York State would qualify for federal coastal management program approval. This would make the state eligible for federal funding for program implementation and would assure that the federal consistency provisions of the federal act apply to New York State. (See Section C.4 for discussion on alternatives for uses of federal assistance). However, this alternative would require the enactment of the specific new program authorities discussed above.

d. Comprehensive coastal management program authority

This alternative would also keep all existing state program authorities, but in contrast to the two previous alternatives would add new legislative authority for the state to institute a comprehensive state coastal management program that would directly control development throughout the coastal area. A variety of sub-options exist for this alternative in terms of the extent to which development would be controlled. These could range, for example, from a program that would directly control all development anywhere in the coastal area to a program that would directly control only a few key types of development with a specified minimum size in specific designated locations. This alternative would establish priorities for permissible uses in specific locations within the coastal boundary, both in terms of areas appropriate for development and areas where development would be inappropriate. It would also fill any gaps in existing state management program authorities. Implementation measures to be administered by the State could include special coastal development permits, state coastal zoning and/or other methods. This alternative would result in significant restrictions on local government authorities, depending on the sub-option selected (see also Section 2.d).

Analysis:

This alternative would establish a new level of state management program authority for the state's coastal resources

as an addition to existing state and local government authorities. It would require new state legislation and would increase the amount of government regulation in coastal areas, although the precise amount would depend on the sub-option selected. However, it would provide uniform statewide implementation of policies for coastal resources and would increase predictability regarding the use of coastal resources. The alternative would qualify the State for appoval of its coastal management program, making federal financial assistance available to the State. While this authority would provide an effective means of managing coastal resources, it could create problems associated with coordination and possible preemption of existing authorities, both state and local. The establishment of a new level of government administration could either expedite or delay the development process in coastal areas, depending on the effectiveness of the administration.

2. Local Government Authority Alternatives

a. Status Quo

This Status Quo alternative would simply continue unchanged the existing powers and responsibilities of local governments. Under authority of Article IX of the New York State Constitution (the "Bill of Rights for Local Governments"), the Statute for Local Governments, the Municipal Home Rule, and various other statutes, local governments in New York State are authorized to exercise a broad range of powers, including the enactment of strong land use control programs if they so choose, as long as these powers are not specifically preempted by state and federal law. Local land use control programs are exercised primarily through local zoning and subdivision controls, which can be used to manage land and water resources of the community. Because the use of such authority is optional, however, local land use control programs in coastal areas range from very strong to non-existent. Furthermore, not all local land use programs in coastal areas fully take into consideration the environmental and economic importance of coastal resources.

Analysis:

Under the local government Status Quo alternative, there would be no changes in existing local government authority. Local governments may presently enact their own programs to manage coastal resources through such tools as local zoning. In addition, under the State Environmental Quality Review Act (SEQRA), local governments are required to consider environmental factors in reaching decisions on proposed actions and to prepare environmental impact statements on actions significantly affecting the environment. However, there is no existing coordination mechanism to prevent inconsistencies or conflicts between these

local government programs, nor any mechanism to ensure uniform, equitable and wise management of coastal resources, except where state programs provide for the management of resources of state concern. This lack of uniformity and lack of coordination make control of the development process in coastal areas uncertain and also results in uneven protection of valuable coastal resources. Under this alternative, local governments would not have specific local coastal management programs and thus would not be eligible for federal financial assistance for coastal management, even if the state agencies were given adequate authority to qualify New York State for federal approval under the Coastal Zone Management Act (local government participation in coastal management is not a prerequisite to federal approval). (However, see following alternative).

The Status Quo alternative would be consistent with New York State's "home rule" tradition and would be responsive to many local attitudes about desirable levels of local involvement in land use regulations; but the existing significant gaps in the management of coastal resources by local governments would remain, as would the problems and cumulative impacts of piecemeal local decisions. Although the state coastal management program would provide the basic level of coastal management required for federal program approval, the status quo local alternative would result in inconsistencies between state policies and local policies, where these exist, which could lead to conflicts in the protection and management of coastal resources and to possible losses of those resources not explicitly protected by state programs. Also, although the state would have override authority to assure the siting of facilities of regional benefit, opposition of local governments could limit the ability of the state to promote such actions as economic development in otherwise desirable locations.

b. Voluntary Local Coastal Management Programs Complying with State Coastal Management Programs

Under this alternative, specific provisions would be made by means of state legislation for local governments to enact local coastal management programs that comply with the State Coastal Management Program. Local government participation would not be necessary for federal approval of the State Coastal Management Program. This alternative would differ from the status quo alternative chiefly in that approvable local programs would be required to meet criteria prepared by state coastal management agency, including conformance with state coastal management policies. Participating local governments would be eligible for financial and technical assistance in preparing local management programs and in managing coastal resources.

Analysis:

Voluntary local participation in the coastal management program would provide additional management attention to coastal resources beyond that provided by the state program. The effectiveness of this participation and its attractiveness to local governments

would depend to a significant extent on the specific approval criteria used by the state coastal management agency and the amount of federal financial assistance available for implementation of local coastal management programs.

Although this alternative would result in greater local participation in coastal management than under the status quo alternative, the voluntary nature of local participation would result in similar problems of inconsistencies and potential conflicts in the management and protection of coastal resources, particularly between those localities that do and do not participate in the program. Including local governments in coastal management could make the regulatory process in coastal areas more complex, although many local governments are already involved now in the regulatory process. There is, thus, a need for measures to coordinate and streamline permitting processes, which could be provided by the coastal management program.

c. Mandatory Local Coastal Management Programs Complying with State Coastal Management Program

This alternative would establish, through new state legislation, a requirement that local governments in coastal areas enact local coastal management programs consistent with the State Coastal Management Program. Counties would be authorized to prepare and implement coastal management programs if a locality failed to act; in the event the county failed to act, the state coastal management agency would prepare and implement a local coastal management program. These programs would be required to meet criteria for approval prepared by the state coastal management agency. Local governments would be eligible for financial and technical assistance in preparing and implementing local coastal management programs.

Analysis:

This alternative would eliminate the problems of potential state-local conflicts in the protection and management of coastal resources that would be present in the status quo and voluntary local program alternatives. It would, however, affect local autonomy by requiring that local governments use their present authority to develop and implement coastal management programs, in accord with state guidelines. Depending on the specific state requirements for local coastal management programs, this alternative could help to assure statewide equitability and consistency with the proposed Coastal Management Program, increase enforceability of coastal policies as a result of the universality of local management programs, and result in better management and protection of coastal resources through inclusion of decisions of sub-regional significance in the overall Coastal Management Program.

The alternative may be seen by some as resulting in some loss of local"home rule" prerogatives, but it could also be viewed as resulting in a strengthening of local governments and an exercise of "home rule" authority in a partnership with other levels of government.

d. Preemption of Local Government Coastal Management Authority

Under this alternative, any local controls in the coastal area not consistent with a comprehensive state coastal management program, such as the one described in Section A.1.d. would require authorization under legislation declaring the management of coastal resources to be a matter of state concern. In effect, such controls as zoning would be exercised by the state coastal management agency for areas within the management boundary. Local government jurisdiction within coastal areas would thus be substantially restricted.

Analysis:

This alternative would prevent problems of local government taking actions inconsistent with the State Management Program, and would ensure a uniform mangement program through all coastal areas of the state, with improved management of coastal resources and better predictability for the development process in coastal areas. However, it would significantly limit local "home rule" powers in coastalareas, and would move many land-use and resource decisions from local to state level.

B. Institutional Arrangements

1. State Coastal Management Agency Designation

A number of alternatives are possible for designation of the lead state agency for the Coastal Mangement Program. Responsibility for the program must be assigned to a single state entity, because Section 306 of the federal Coastal Zone Management Act requires that before a state coastal management program can be approved by the federal Office of Coastal Zone Management, the Governor of the State must designate "a single state agency to receive and administer the grants for implementing the management program."

The responsibilities of the "306" Agency, in addition to accepting and administering federal grants to implement the program, and requesting federal approval of proposed amendments to or refinements of the approved Coastal Management Program, include monitoring and evaluating the management of the state's coastal resources by the state, county and local agencies responsible for program implementation. Although the "306" Agency must have the authority to evaluate and monitor performance by other agencies, the mechanism to enforce the program can be provided through other agencies. The responsibilities and authority for the "306" Agency are discussed more fully in Chapter V of the Coastal Management Program.

Five alternatives have been considered for designation of the state "306" Agency. These are the creation of a new coastal management board the creation of a new agency in the Executive Department; the designation of the Department of Environmental Conservation; designation of the Department of State; and designation of the Commerce Department.

a. Creation of a New Coastal Management Board

It is recommended that a new Coastal Management Board be created by new state legislation, with members representing the general public. Through this Board the public will be provided with an active voice in the Program's decision making process. The Board would be free to concentrate its effort and orientation on coastal management policies without bias toward any of the particular interests which the coastal management program seeks to balance. Such a body would also be free from existing biases of from existing biases of local and state agencies.

The Board, operating as an independent entity, will be located in the Department of State. Besides the savings in administrative overhead, this arrangement will provide continuity in the Program, since the Coastal Management Program was prepared by the Department of State. An experienced staff already exists and the loss in momentum that would occur during the hiring and training new personnel will be avoided.

In additin, the Board will be able to coordinate its activities with the Department's statutory responsibilities in other areas requiring a comprehensive and balanced view point of resource protection, development and planning at the state level (i.e. statewide land use planning, preservation of agricultural lands and siting of utility transmission facilities). The Department's responsibility relating to local government, particularly in the technical areas of land use planning and regulation can also be utilized to enhance the Program. Such an approach is advocated by the federal Coastal Zone Management Act.

Disadvantages of the Coastal Management Board approach include the costs of operating the Commission itself -- meetings, minutes, and deliberations. Board vote, expeditious action might not always be possible. Members of a Board appointed for fixed terms could be seen as less directly accountable for their actions than would a single head of a state agency appointed by and directly responsible to the Governor.

b. Creation of a New State Agency

A new coastal management agency could be established within the Executive Department. The agency would presumably be able to devote its efforts to coastal management without specific bias toward any of the particular interests which the management program would seek to balance. A director or commissioner would head the agency.

This alternative would have the disadvange of requiring the creation of a new agency; but it would avoid some of the organizational problems of a coastal management board by having a single administrative head, and would be more likely to be able to act promptly and effectively on coastal issues.

A variation of this alternative would be integration of the Coastal Management Program into a new agency concerned with statewide planning which has recently been proposed for establishment within the Executive Department.

c. Designation of Department of Environmental Conservation

The Department of Environmental Conservation administers several important resource management programs (e.g. wetlands, pure waters, fish and wildlife) that have been incorporated into and will be used to implement the State Coastal Management Program. Consequently, it has had substantial involvement in the preparation of the program. Advantages to designating this agency would be internal control over these programs and the ability to use existing staff.

On the other hand, several development-oriented programs which are administered by other state agencies will also be utilized to implement the State Coastal Management Program. Consistency reviews and coordination of these programs would be required, and it may be difficult to harmonize the operation of these programs within an agency whose primary orientation is environmental.

d. Designation of Department of State

The Department of State has been the lead agency in cooperation with other state and local agencies, in the development of the proposed coastal management program; thus an advantage would exist in terms of familiarity with the program. An experienced staff already exists and no new bureaucratic structure would have to be created. It also has several units within its organization which have experience in working in advisory capacities with local government, in particular with respect to legal and administrative matters, community planning, and technical services. From its particular orientation as local government advocate, it is in a position to provide local governments with a strong voice in a state level coastal management program. In addition, the Department of State is already exercising a number of other statutory responsibilities which call for a comprehensive viewpoint relative to resource development and planning.

On the other hand, the Department of State does not administer several programs which are relied upon to implement parts of the Coastal Management Program. Consistency reviews and coordination of these programs would be required. The reviews, however, would take place concurrently with other agency review processes, thereby minimizing the potential for delays in the review and issuance of permits. Because the Department of State has a variety of local government-oriented responsibilities, an argument could be advanced that such responsibilities are incompatible with coastal management responsibilities which in general express statewide concerns.

e. Designation of Commerce Department

The New York State Department of Commerce is responsible for promoting economic development in New York State and has important responsibilities for several economic development aspects of the Coastal Management Program. The Department has had experience in dealing with local governments on matters of commercial and industrial development, and tourism.

On the other hand, the Department has had little direct involvement in the preparation of the Coastal Management Program to date and would require considerable new staffing to cover those aspects of coastal management which are not now a part of their development promotion focus. Further, the Department could be viewed as being less able, because of its economic development responsibilities, to provide balanced administration of coastal policies, particularly those relating to protection and preservation of coastal resources.

2. Sub-state Participation in Coastal Management

Several of the alternatives discussed in Section A on authority for the Coastal Management Program would involve participation by sub-state entities. There are a number of alternative institutional arrangements for this participation in the state program, not all of which would require that an agency have the authority to administer a sub-state coastal management program. These alternatives include participation by cities, towns and villages; by counties; by regional planning agencies and regional state commssions.

a. City, town, village

Cities, towns and villages, as noted above, have the authority to enact programs to manage their resources, including coastal resources. These units of government could participate on a voluntary or mandatory basis in the State Coastal Management Program, depending on the chosen program alternative. The advantages of participation by these units of government could be improved management of coastal resources, greater coordination of local and state programs, and greater consideration of local concerns in coastal management. Disadvantages would be in achieving policy coordination among as many as 240 units of local government and the difficulty of assuring coordination

and consistency review of local actions.

b. County

One of the proposed authority alternatives discussed above (A.2.c) would authorize counties to prepare and administer a local coastal management program if a city, town or village failed to do so. Alternatively, counties could be given this authority directly, excluding participation by cities, towns and villages. Giving counties coastal management authority would enable designation of counties as local coastal management agencies. Advantages of county designation could be improved management of coastal resources which would still reflect local concerns. To the extent that counties administer coastal management programs instead of cities, towns and villages, problems of state-local and local-local coordination would be greatly eased by the reduction in number of involved governmental units. On the other hand, if counties administer such programs for some localities at the same time that other cities, towns and villages within the county were administering their own local coastal management programs, problems of coordination and review could be exacerbated.

Counties could also participate in the coastal program without having specific authority for resource management, by providing technical assistance and by monitoring and evaluating local coastal management programs. This delegation of monitoring and evaluation functions from the state to counties could reduce the need for a large staff to carry out these functions at the state level but could also create problems because the need for uniformity in evaluating local programs might not be met. In addition, because ultimate responsibility for monitoring and evaluation of local programs would remain at the state level, state staff might still need to examine both local programs and county evaluation of these programs, reducing the potential for state staff savings.

c. State Commissions with Regional Jurisdictions

These commissions could (as a variation on authority alternative A.1.c.) play a role in administering local management programs. These commissions, with appropriate authority, could provide improved management of coastal resources, although this would depend largely on the powers assigned to the commissions. They would presumably be so constituted as to take local concerns into account in the management program, and they would reduce problems of state-local and local-local coordination by reducing the total number of administrative units involved in the Coastal Management Program. However, these advantages would come at the expense of local government "home rule" powers. Furthermore, they would constitute an additional layer of government beyond those that now exist, which might lead to overall policy coordination problems and delays in the development process.

d. Regional Planning Agencies

Regional planning agencies can perform a role in the coastal management program. These agencies could provide technical assistance to counties and local governments and could be given responsibility to monitor and evaluate local and county coastal management programs. Delegation of this responsibility by the state coastal management agency could reduce the amount of state staff that would otherwise be required for this purpose. Delegation of this responsibility to regional planning agencies could create problems of uneven interpretation of policy across the State.

C. Other Issues

1. Boundaries

In order to have an effective coastal management program, the boundaries of the coastal area must be clearly defined. The federal Coastal Zone Management Act requires the boundaries "to extend inland from the shoreline only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters." Within this requirement, the boundaries could be drawn broadly or narrowly.

An expansive boundary, such as one that included all of the watersheds draining into the state's coastal areas, could control viturally all uses affecting coastal waters, but would do so at the expense of having to control many uses with no effect on coastal waters. An expansive boundary would thus be an inefficient means of providing management of coastal resources and could require substantial administrative support.

A limited boundary, such as one that extended only a short distance from the shoreline (e.g., 1,000 feet) would substantially limit the area to be regulated under the Coastal Management Program, but might not provide for all uses that could affect coastal waters.

In practice, the actual boundary proposed in the Coastal Management Program represents a compromise between these two alternatives, based on consideration of specific local and statewide interests in each segment of the boundary. The specific proposed boundary is discussed more fully in Section III of the Draft Coastal Management Program.

Two other options regarding the boundary were considered. One involved a single-tier boundary - that is, the Coastal Management Program would have applied equally to all areas within the boundary. The other involved a multiple-tier boundary. Under the latter alternative, land within the overall coastal boundary would have been divided into two or more areas, each of which would have been subject to a different level of management for land and water uses.

2. Funding Allocation

One of the major advantages in having a federally approved coastal management program is that the State will become eligible for federal financial assistance for coastal management. The major anticipated

source of funding would be implementation assistance provided under Section 306 of the Act, although other sources of funding for specific aspects of coastal management, such as coastal energy impacts, are also available. There are a number of major categories to which such funding could be allocated, including the following:

- Administration of the Coastal Management Program. This would include such administrative functions as applying for, accepting and distributing assistance, as well as monitoring and evaluating performance and compliance with the program by other agencies. Administration funds would be used by the "306" Agency.
- Improving management of existing state programs incorporated in the Coastal Management Program. This could include providing additional regulatory staff for specific programs that are key to the coastal management effort, such as tidal and freshwater wetlands, in order to provide improved protection and management and speed the processing of permit applications.
- Preparing and adopting local coastal management programs. Funding could be provided directly to local governments to prepare and adopt local programs for managing coastal resources. In addition, funding could be used to support technical assistance to local governments by the "306" Agency or other state agencies.
- Administering adopted local coastal management programs. Assistance could be provided to local agencies to administer local management programs and to provide additional support for local management efforts.

Other federal funding sources would also be available if New York State has a federally approved coastal management program. The most significant of these is the Coastal Energy Impact Program, which is designed to help states and local governments in planning for and responding to the impacts of coastal energy activities, including power plants and Outer Continental Shelf oil and gas activity. Other sections of the Coastal Zone Management Act authorize federal financial assistance for such purposes as land acquisition; however, appropriations under these sections have not been made.

IV. Probable Effects of Program Implementation

A. The Environment

New York State proposes to implement a Coastal Management Program consistent with the federal Coastal Zone Management Act that is designed to improve the management of coastal resources and resolve conflicts between competing uses in the state's limited coastal area. The proposed program is intended to have a beneficial effect on the coastal environment, encouraging the most environmentally-appropriate uses of coastal resources and minimizing many of the otherwise adverse environmental consequences of coastal development. The program will provide for the protection and management of key coastal areas and the environmentally sound development of suitable areas. The proposed program is described in detail in Sections IV and V of the Coastal Management Program.

For implementation, the program will rely primarily on various types of existing state and local authorities supplemented by several

new authorities. Because these existing programs already provide for the effective management of most matters in coastal areas that are of statewide or regional concern, the new authorities needed to implement the proposed program will not result in major environmental changes; nevertheless, net environmental effects of the Program should be beneficial.

Article XIV, Section 4 of the State Constitution, establishes state policy to conserve and protect the state's natural resources and scenic beauty and encourages the development and improvement of its agricultural lands. In accordance with constitutional mandates, the Legislature has enacted programs for the abatement of air and water pollution, the protection of agricultural lands, wetlands and shorelines, and the development and use of water resources.

These and other major programs that are to be incorporated into the proposed Coastal Management Program are described in more detail in Section V of the draft Coastal Management Program and Appendix G.

New York State's air and water quality programs, administered by the Department of Environmental Conservation under the federal Clean Air Act and Federal Water Pollution Control Act and their amendments, would be incorporated directly into the Coastal Management Program, in conformance with the requirements of the federal Coastal Zone Management Act. These DEC programs will be used to continue to safeguard coastal air and water resources by controlling and limiting existing and new sources of pollution throughout the State, as well as in coastal areas.

Other existing DEC programs that manage and protect coastal resources will also be incorporated into the coastal management program. The Tidal Wetlands and Freshwater Wetlands Programs will be used to preserve and protect tidal and freshwater wetlands and adjacent areas from despoilation and destruction, and to assure continuation of the long and short term benefits of wetlands, including the maintenance of biological productivity in lakes, rivers, bays and estuaries, the prevention of flooding, and the protection of coastal water resources and fish and wildlife habitats. Development activity in and adjacent to wetlands will be regulated to prevent or at least mitigate any adverse environmental impact. Local governments with approved permit programs will be eligible to participate in the regulation of freshwater wetlands. Acquisition funding provided by the 1972 Environmental Quality Bond Act will also be used to assure full protection for individual wetland areas and to acquire unique areas of notable natural beauty, wilderness character and geological or ecological significance which are not protected under public stewardship. Acquired unique areas and historic areas will be managed and protected under the State Nature and Historical Preserve Trust.

The Coastal Management Program will establish a new program for the designation and management of identified Geographic Areas of Particular Concern (GAPCs) that are to be given special management attention because of their coastal-related values and characteristics or because they face special pressures. The GAPC process, the identified GAPCs, and their proposed management programs, are described in Section VI of the Draft Coastal Management Program.

The identified GAPCs have been selected on the basis of eight general criteria, five of which address the protection and management of natural and historic resources of statewide importance. These include protection of fish and wildlife and their habitats; sites for public access; sites for public recreation; historic, scenic and cultural sites; and areas where erosion, flooding and other natural hazards create threats of regional or statewide significance.

Tidal and freshwater wetlands, state parks, and historic sites and structures on the National Register of Historic Places have all been designated as generic GAPCs. The proposed program also provides for the designation of site-specific GAPCs of statewide importance, which have been identified on the basis of whether their individual characteristics meet the criteria for GAPC designation. GAPC designation means that the area in question will receive priority, and in some cases, immediate attention from the Program.

The State Protection of Waters Program will be used to minimize disturbances to beds and banks of protected streams and shorelines in order to protect fish and wildlife and their habitats; to protect the water rights of property owners along water bodies; and to protect navigable waters through control of dredging and filling and placement of dams. This program will serve to mitigate the adverse impacts of dredging, filling and construction of dams and docks on the coastal environment.

The Office of General Services has authority over the transfer, lease sale and use of state-owned lands, including underwater lands. Actions taken by OGS in the coastal area will be subject to Coastal Management Program review.

Agricultural areas will be supported and given protection from development through use of the Agricultural Districts Program and its property tax relief provisions for farmers. The Mined Land Reclamation Program will be used to assure that areas used for mining will be restored to productive uses. Assurance that flood hazard areas will be adequately regulated to prevent unwise development will be provided by the flood plain management and flood insurance programs, administered by local governments and DEC. A new related program, proposed as part of the Coastal Management Program, would institute structural and non-structural controls in areas prone to shore erosion so that coastal erosion-related damages could be minimized.

State parks and recreation areas will continue to be managed by the Office of Parks and Recreation to assure the availability and accessibility of public recreation resources in coastal areas. Funding for acquisition of additional park lands and open space, shoreline access points, and trails is available under the 1972 Environmental Quality Bond Act. Present state transportation planning and development activities will continue to be conducted by the Department of Transportation.

The existing state energy facility processes will be used to ensure that adequate energy supplies are available and that adverse environmental impacts and safety hazards are kept at a minimum. The siting processes include the Public Service Law, Articles VII and VIII transmission line and steam electric generating plant siting processes

and the Environmental Conservation Law liquefied natural gas facility siting process. In addition, the State Energy Office Energy Master Plan process will be a part of the proposed Coastal Management Program. Also, under 1977 New York State legislation, new sections of the State Navigation and Highway Laws provide that all petroleum transport and storage facilities handling over 400,000 gallons are required to have plans and equipment available for the prevention, containment and cleanup of potential oil spills, thereby making such energy-related facilities much more environmentally acceptable.

These and other major programs that are to be incorporated into the proposed Coastal Management Program are described in more detail in Section V and Appendix G. The environmental effects of existing programs will not be significantly altered after the programs are incorporated into the Coastal Management Program, although administrative changes in regulations may be required to accommodate the review procedures to be established under the Coastal Management Program. Existing local government programs affecting the coastal environment will also continue, although local governments will have the option of preparing and administering local coastal management programs that are consistent with the State Coastal Management Program.

B. Institutional Impacts

Although the proposed Coastal Management Program will rely largely on the use of existing state programs, it will also create new institutional arrangements designed to focus attention on, and improve the management of, coastal resources. These new arrangements will not affect present constitutional relationships between state and local government, but should increase coordination and cooperation among different levels of government as well as encourage local governments to exercise their power and responsibilities more fully in coastal areas. The new arrangements should also help local governments resolve problems on a partnership basis with state and other local agencies which they previously had to face alone.

The proposed Program establishes new state coastal management policies that will guide state and federal agency actions, along with those actions taken by participating local government. The Program will require that all such actions be consistent with program policies. Participation by local governments in the state program should increase state-local cooperation and coordination and help to assure that local and state policies and management practices in coastal areas are in agreement. The consistency provisions of the federal Coastal Zone Management Act should help ensure that any federal actions which may have impacts on New York State's coastal area will be consistent with the approved State Program policies. The policies and their specific impacts are described in detail in Section IV.

The coastal management agency (the "306" Agency) will develop a process through memoranda of understanding and other administrative arrangements to ensure consistency of state agency and local government actions with coastal management policies. The consistency process is

intended to provide better coordination and uniformity of state agency and local government actions. However, as a result of the time required by the 306 Agency for making consistency determinations, federal actions such as the issuance of permits may be delayed. Changes in agency regulations will also be required to ensure compatibility of agency administrative mechanisms with the coastal management consistency procedures. The application of different procedures inside and outside the coastal boundary could cause confusion for developers and increase administrative problems for state agencies and local governments. Such confusion could be heightened by virtue of the fact that local government participation is optional and a patchwork pattern of local involvement may evolve.

Federal approval of the proposed State Program will result in increased federal grants and other financial assistance to New York State. Three to five million dollars would be made available annually under Section 306 of the federal Coastal Zone Management Act for program administration and managing coastal resources. Program approval would also mean that an additional one half to one million dollars in annual grants and one million dollars in loan guarantees would continue to be available for planning for and responding to the impacts of coastal energy activity under Section 308, the Coastal Energy Impact Program. The federal act also authorizes grants for interstate cooperation under Section 309, for research under Section 310, and for shore access and marine sanctuaries under Section 315, although to date, no federal appropriations have been made under these sections. Available federal funds could be used to improve state agency and local government management of coastal resources, although because no specific allocation of the "306" funds has been proposed in the Coastal Management Program, the impacts of such federal assistance cannot be assessed at this time.

State and participating local coastal management programs will also affect local tax revenues and expenditures. The identification of some coastal areas for protection and preservation may limit property tax revenues from those areas, although the aesthetic and other benefits of protected areas may result in an increase in adjacent or nearby property values. Communities could also benefit economically from recreational and other uses of protected areas. Similarly, the designation of certain coastal areas for water-dependent development may increase property tax revenues from these areas as well as tax revenues resulting from increased employment and economic activity. In some instances this may be partially offset by adjacent properties being reduced in value as a consequence of the new activity. But this adverse consequence will be minimized by emphasizing, during the selection of appropriate industrial sites, compatibility with adjacent uses. Another financial impact on localities would relate to possible major capital investment required as a result of new water-related development. Such investments appear unlikely, however, because of the Program's emphasis on channeling growth to developed areas where existing infrastructure can accommodate growth.

Programs to regulate erosion and flood hazard areas should have beneficial impacts on localities and the State, by preventing the loss of property and life that results from unwise development, and by eliminating or reducing the need for government disaster relief and for funds to replace, repair or reconstruct damaged roads, sewers and

other infrastructure. On an immediate basis, however, tax revenues may be reduced to the extent that more stringent land use restrictions on private property will reduce the value of the property, and therefore property tax revenues.

C. Development Impacts

1. Development Patterns

The Coastal Management Program is committed to altering the dispersed pattern of development which has prevailed throughout the State over the last 30 years. The Program's contention is that not only would a reversal in current trends protect the environment, it would also strengthen the economy of the State. To accomplish its objective, the Program will rely somewhat on restrictive measures, such as wetland, wildlife habitat, or erosion legislation. Primary reliance, however, will be on inducing growth in already developed areas through more affirmative methods discussed in the policies section, such as federal and state consistency, capital facilities programming, permit expediting, and water-dependent development legislation. Implementation of these methods will result in greater intensity of activity in existing population and commercial centers, and increased protection of non-intensive uses outside of already developed areas. State policy to favor concentration of development will not, however, automatically preclude development in non-urban areas; localities will still have the basic land-use decision-making role. Consequently, although the State can take significant steps to reverse current trends towards dispersed development, the full impact of the Program will not be clear until the degree of local support is known.

2. Jobs

A net gain in the number of jobs in the State is anticipated as a result of the Coastal Management Program. Of prime importance is that no program policies infringe on existing economic activities and therefore no existing jobs should be lost.

In the future, the Program can be expected to have a positive impact on jobs in industries dependent on a sound environment, e.g., fishing, agriculture, recreation and tourism. Water-dependent industries, e.g., ports, boat construction, or any manufacturing concern that requires waterfront space, will be favored by Program policies and are also expected to increase their employment levels. People-oriented commercial activities which locate in revitalized urban waterfront areas will benefit from having a location with high pedestrian traffic.

Employment in the State should increase, in general, because the Program is committed to (1) helping industry find appropriate sites on which to locate and (2) creating an improved environment which will make the State a more appealing place to live and work. These objectives, if attained, would contribute to improving the state's tarnished image and in so doing, the Program would be making whatis potentially its most important contribution to the State.

A possible negative impact that the Program would have in terms of jobs relates to the situation in which a non-water related business seeks a location on a site that is favored for water-related uses. If a water-related use also sought that site, the latter use would be favored. The non-water-related use would be encouraged to located inland or on another site in the coastal area where development is desirable and there is no competition from a water-related use. It is possible, in such a situation, that the activity in question would choose to leave the State. Another negative situation that might arise would be if a business concern seeks to locate on an environmentally unsound site, has its proposal rejected and then, rather than locate where development would be desirable, proceeds to locate in another state. These hypothetical cases would obviously cost the State jobs, at least on an immediate basis, but the frequency with which they will occur should be at an acceptable, low level, particularly because the Program will anticipate such situations and is intent upon having desirable alternative sites available.

3. Land Values

As discussed in the section on Institutional Impacts, there may be a reduction in the value of land coming under increased protecti-n, e.g., land subject to proposed erosion legislation, prime agricultural land. From a societal perspective, however, these losses will be offset by increases in the value of residential property adjacent and near to protected natural areas and by increases in the value of land in those areas where development is favored.

4. Effects on Use and Conservation of Energy

The concentration of new development in appropriate areas, and the limitation of new development in less appropriate areas, may help to reduce future energy consumption for transportation. Also, any rejuvenation of port facilities may result in incremental shifts to the use of water transportation for some commodities. Because ships and barges are an energy-efficient means of transportation, some conservation of energy is a likely consequence of the program policy to favor port development.

The proposed Program provides for the development of additional energy supplies for the State, consistent with proper environmental protection. The Program recognizes that environmentally sensitive development of Outer Continental Shelf(OCS) oil and gas resources could benefit New York State, and encourages the economic benefits that would be derived from the location of OCS-related support facilities in environmentally compatible areas of the coast. The development of Lake Erie natural gas under strict environmental regulations would also provide additional energy supplies to the State. Power plant siting under the Article VIII process and liquefied natural gas (LNG) facility siting under the Environmental Conservation Law would take coastal policies into account and be balanced along with other, sometimes competing policies.

It should also be noted that a new state energy conservation building code is now in effect in New York State. The mandatory new code will help to assure that energy conservation is explicitly taken into account in the construction of new structures throughout the State, including areas within the coastal boundary.

D. Social Impacts

The Program is expected to have a favorable social impact. In the first place, the Program seeks to create a heightened awareness of the relationship between land and water, hoping to contribute to people's understanding of their own relationship with the environment.

A second social benefit will accrue to those communities which undertake successful waterfront redevelopment. A deteriorated waterfront is an economic and psychological burden; a vibrant waterfront area can serve as a catalyst for areawide rejuvenation and a sense of pride in one's neighborhood.

A third positive impact relates to the policy to favor the concentration of development. Suburbanization has denied many people the interaction among disparate social groups and the sense of community experienced by order generations growing up in urban neighborhoods. Revitalized urban cores, and clearer definition of town boundaries (accomplished through maintenance of open spaces), will serve to give people a renewed sense of community.

A final favorable social impact of the Program will result from Program policies aimed at increasing access to the shore. Poorer, less mobile people have been denied the opportunity to enjoy the state's coastlines. Improved public transportation, increased amounts of available park acreage, and efforts to gain easements tc appropriate waterfront landholdings, will all contribute to increased use of the shore by previously disadvantaged segments of the population.

A possible negative social impact of the Program would be friction between those who already enjoy the benefits of the water and those newcomers who may be regarded as "intruders." The Program recognizes that some fears are justified: too many people, or poor behavior by a few, can make things unenjoyable for everyone. The Program will take steps to ensure that increased public access is undertaken judiciously, without infringement on property rights, and without taxing the carrying capacity of any given resource.

V. Unavoidable Adverse Environmental Effects

The proposed New York State Coastal Management Program is expected to have a net positive environmental effect. Since the Coastal Management Program utilizes existing resource management programs which are designed to reduce and minimize adverse environmental effects, and since a primary goal of the Program is to improve the operation of these existing programs, its successful implementation will enable the State to further minimize unavoidable adverse environmental effects.

The Program will direct water-dependent development towards those areas identified as most environmentally suitable for development. Increased water

and air emissions shall occur but these will be regulated so as to avoid violating the state's water and air quality standards. Any dredging projects required for such development activities must be conducted so as to reduce adverse impacts on water quality, fish and wildlife habitats and other natural resources, to a level acceptable to those authorities operating the state's dredging permit system. Increased costs borne in meeting these requirements by the developer may be at least partially offset through technical assistance provided by the Coastal Management Program.

Some unavoidable losses of coastal resources which are not of statewide significance and are not specifically protected under the Program may occur. Any federal, state or local government action that is significant will, however, be subject to consistency review by the Coastal Management Program. The requirements of the State Environmental Quality Review Act and National Environmental Policy Act shall also be met as appropriate.

An important component of the proposed Coastal Management Program is the new authority which would regulate new development occurring in locations designated as coastal erosion hazard areas. Immediate, short-term adverse environmental impacts would include restriction of some private and public development activities, which, in turn may reduce property values or limit economic growth potental. On a long term basis, however, these restrictions will eliminate erosion-induced damages and will preclude the need for the government to implement costly emergency measures and long-term remedies. In addition, the reduced property values of erosion-hazard areas may be offset by increased property values of those areas identified through the Program as being suitable for development. The magnitude of such gains and losses cannot be estimated at this time.

Another important new component of the Coastal Management Program is the water dependency legislation which assigns priority to those uses requiring waterfront location over those which do not. This legislation applies mandatorily only to cities within the coastal boundary, for it is in these highly developed areas where competition for space is most severe. Provision is made for voluntary participation by towns and villages. A possible unavoidable adverse environmental effect is the short term economic losses that might occur by assigning priority to a less profitable water-dependent use over a more profitable non-water-dependent use. Although every effort will be made to find ways to offset this economic loss, there probably will be a few cases where this cannot be done.

The federal Coastal Zone Management Act requires the states to consider the national interest in the siting of facilities and to ensure that local governments do not restrict or exclude uses of regional benefit. These two requirements may facilitate the siting of various types of development which might otherwise be excluded from the coastal area and which might have some adverse impact on the environment. The specific impacts will depend on the precise action, facility and location, and cannot be quantified at this time.

VI. Irreversible and Irretrievable Commitments of Resources

State adoption and federal approval of the proposed Coastal Management Program will not in and of itself lead to losses of coastal resources. The implementation of coastal management policies will affect state agency and participating local government actions in coastal areas, and may thereby result in irreversible and irretrievable commitments of resources. For

example, policies to channel growth to already-developed areas along the coast and to give priority to water-dependent uses will lead to increased development in these areas and to consequent irreversible commitment of resources. Development of an area necessarily results in the affected area being committed to the new use for an indefinite period of time, and can practically be considered irreversible and irretrievable.

To the extent that the Program supports public acquisition of environmental, cultural and recreational resources in coastal areas, the Program will result in commitment of these resources to public use, and the exclusion of these areas from future private use. This is especially true of areas added to the state Nature and Historical Preserve Trust, which are given constitutional protection and cannot be take out of the preserve except by law enacted by two successive regular sessions of the Legislature.